

# Project Administration Manual

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**INTERNAL**

Project Number: 56218-001  
Loan Numbers: {LXXXX; LXXXX}  
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## Nepal: Irrigation Modernization Enhancement Project

## ABBREVIATIONS

ADB	–	Asian Development Bank
ADP	–	agriculture development plan
AKC	–	agriculture knowledge Center
AULL	–	agriculture unit at local level
CAMO	–	Central Agriculture Management Office
CAP	–	corrective action plan
CPMO	–	Central Project Management Office
DDR	–	due diligence report
DWRI	–	Department of Water Resources and Irrigation
DOA	–	Department of Agriculture
FMIS	–	farmer-managed irrigation system
GDP	–	gross domestic product
HLIP	–	Hill Lift Irrigation Project
ICWM	–	integrated crop and water management
JET	–	Junior Extension Technicians
MIS	–	management information system
MOM	–	management, operation, and maintenance
MOALD	–	Ministry of Agriculture and Land Development
MOEWRI	–	Ministry of Energy Water Resources and Irrigation
MOPID	–	Ministry of Physical Infrastructure and Development at Province
O&M	–	operation and maintenance
PAM	–	Project Administration Manual
PIMS	–	Project Implementation and Management Support
PIU	–	project implementation unit
PPCD	–	Planning Program and Coordination Division of DWRI
PSC	–	project steering committee
RAMO	–	Rajapur Agriculture Management Office
RIMO	–	Rajapur Irrigation Management Office
RIP	–	Rajapur Irrigation Project
SFD	–	Saudi Fund for Development
SMC	–	subproject management committee
SOE	–	statement of expenditure
WRIDD	–	Water Resources Irrigation Development Division
WRIU	–	Water Resources and Irrigation Unit at Province Level
WUA	–	water user association
WUC	–	water user cooperative

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### **Project Administration Manual Purpose and Process**

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and following the policies and procedures of the government and the Asian Development Bank (ADB). The PAM should reference all available templates and instructions either by linking to relevant URLs or by directly incorporating them in the PAM.

The purposes of the PAM are to (i) share the project status with ADB's and the government's project teams, (ii) identify the contact persons to facilitate communication and coordination between ADB and the government, and (iii) facilitate preparation of the project completion report. The PAM will be useful for new project members to understand the project status easily and communicate effectively with other members.

The Department of Water Resources and Irrigation (DWRI) and the Department of Agriculture (DOA) are wholly responsible for implementing ADB-financed projects, as agreed jointly between the borrower and ADB, and following the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation, including monitoring compliance by DWRI and MOA of their obligations and responsibilities for project implementation following ADB policies and procedures and the loan agreement.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In case of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendation of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the project administration instructions) and upon such approval, they will be subsequently incorporated in the PAM.

## I. PROJECT DESCRIPTION

1. The project will (i) improve productivity, profitability, and climate resilience of farmer managed irrigation systems (FMIS) across five provinces; and (ii) institutionalize irrigation modernization and integrated crop water management (ICWM).<sup>1</sup> The project will help improve incomes of approximately 56,000 families. The project will (i) modernize 32,000 hectares (ha) of surface water irrigation systems; (ii) pilot innovative hill lift irrigation systems to irrigate 1,354 ha *tar* (dry uplands); (iii) strengthen capacity of farmers and government institutions in ICWM; and (iv) introduce climate smart agriculture and support agriculture value chain services for increasing productivity and profitability through mechanization and commercialization of agriculture. The project will enable farmers to be self-sufficient in the operation and maintenance of their systems.

2. The project is aligned with (i) Nepal's National Water Plan 2002–2027 which aims at increasing water use efficiency to provide year-round irrigation through modernization of FMIS;<sup>2</sup> (ii) Agriculture Development Strategy 2015–2035 which promotes acceleration of agricultural intensification and diversification into high-value crops to achieve Nepal's over-arching goal of economic growth and poverty reduction;<sup>3</sup> and (iii) National Water Resources Policy 2021 which promotes round the year irrigation, lift water to irrigate uplands, and institutional strengthening of concerned stakeholders.<sup>4</sup> The project will also support the implementation of the Second Nationally Determined Contribution to climate change particularly to increase access to climate-smart agriculture technologies to smallholder farmers and marginalized groups.<sup>5</sup> The project aims at reducing rural poverty through: (i) empowering women farmers, (ii) ensuring water security and building climate resilience, and (iii) increasing food security and reduce rural poverty.<sup>6</sup> It is aligned with the Asian Development Bank (ADB) country partnership strategy for Nepal, 2020–2024;<sup>7</sup> ADB's Water Sector Directional Guide that aims for poverty reduction, gender equality, climate resilience, food security, and capacity building;<sup>8</sup> ADB's increased focus on climate investments; and with operational priorities of ADB's Strategy 2030.<sup>9</sup>

3. The project will be aligned with the following impact: national food security increased. The project will have the following outcome: productivity and sustainability of farms in project areas increased. The project will have three outputs as summarized below. The design and monitoring framework in Appendix 1 presents the impact, outcome, outputs targets, and performance indicators.

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<sup>1</sup> These provinces include Bagmati, Gandaki, Koshi, Lumbini, and Madhesh provinces.

<sup>2</sup> Government of Nepal, Water and Energy Commission Secretariat. 2005. [National Water Plan, 2002–2027](#).

<sup>3</sup> Government of Nepal, Ministry of Agricultural Development. 2015. [Agriculture Development Strategy, 2015–2035](#).

<sup>4</sup> Government of Nepal, Ministry of Energy, Water Resources and Irrigation. 2021. National Water Resource Policy.

<sup>5</sup> Government of Nepal, Ministry of Forests and Environment. 2021. [Vulnerability and Risk Assessment and Identifying Adaptation Options. Summary for Policy Makers](#). Kathmandu. Government of Nepal. 2020. [Second Nationally Determines Contribution](#).

<sup>6</sup> Nepal has built an enabling legal and regulatory framework to spur climate action and its climate change commitments are embedded in a Green, Resilient and Inclusive Development (GRID) approach. The government issued the Kathmandu Declaration for the GRID Partnership in 2021.

<sup>7</sup> ADB. 2019. [Country Partnership Strategy, Nepal, 2020–2024—Promoting Connectivity, Devolved Services, and Resilience](#).

<sup>8</sup> ADB. 2019. [Strategy 2030](#). Manila and ADB. 2022. [Strategy 2030 Water Sector Directional Guide](#).

<sup>9</sup> The project is aligned with the following operational priorities (OP): (i) OP 1 in addressing remaining poverty and reducing inequalities; (ii) OP 2 in accelerating progress in gender equality; (iii) OP 3 in tackling climate change and building climate and disaster resilience and enhancing environmental sustainability; (iv) OP 5 in promoting rural development and food security; and (v) OP 6 in strengthening governance and institutional capacity. ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#).

4. **Output 1: Irrigation infrastructure modernized.** This output will modernize approximately 100 FMISs covering a command area of 17,452 ha and the Rajapur Irrigation Project (RIP) covering a command area of 14,500 ha to improve performance and increase resilience to climate change.<sup>10</sup> Across the FMIS and RIP, the project will (i) construct and/or rehabilitate permanent gated intake structures and protect around 1.5 kilometers of riverbanks and hill slopes to reduce flood and sediment ingress in the system, improve irrigation system efficiency and stability, and support on-farm irrigation and equitable management of irrigation water—this is through targeted selective irrigation canal lining, improved gated control structures, improvement of cross drainage, and piloting groundwater irrigation for conjunctive use; (ii) construct 12 new pilot hill lift irrigation systems irrigating 1,354 ha by pumping riverside subsurface water to high dry land (*tar*) and distribution of water by using modern pipe and micro irrigation systems with volumetric regulators for high water use efficiency.<sup>11</sup> The detailed output is presented in Appendix 6.

5. **Output 2: Capacity of irrigation and agriculture agencies and farmer organizations strengthened.** This output will build the capacity of the farmers and government agencies in ICWM incorporating climate change, sustainable operation and maintenance (O&M) of the irrigation infrastructure, construction of field level water distribution system, support in the development of agri-enterprises, and support in the development of market chain and access to finance. The project will strengthen the capacity of water resources irrigation development divisions (WRIDDs), agriculture knowledge centers (AKCs), and the local bodies (municipalities) in integrating irrigation management, irrigation infrastructure asset management, and agriculture development. At the farm level, the project will (i) strengthen the capacity of water users' associations (WUAs) and government staff to better operate and maintain irrigation systems; and (ii) establish water users' cooperatives (WUCs) in selected irrigation systems. The WUAs are registered in WRIDDs as community-based organization for operation and maintenance of systems and raise irrigation service fee based on Irrigation Policy 2013, whereas WUCs will be registered in the local bodies as commercial entity following Nepal Cooperative Act 2017. WUCs are more formal and commercially operating farmers enterprise and are eligible to receive government quota and subsidies (fertilizers, seedy), can run saving and credit program for farmers, get engaged in agri-enterprise, have networking with other marketing and processing agencies, and adopt collective marketing. WUCs will have integrated irrigation management and agribusiness functions. This will help to develop value chain, establish agro-enterprises, and network with private agro-enterprises.<sup>12</sup> For the Hill Lift Irrigation Project, the project will strengthen WUCs to operate as water utilities using metered charging systems, and establish irrigation service fees (ISF) to meet the operating costs. In total, at least 20 WUCs will be formed. At least 33% women and 10% of disadvantaged group members of WUC will develop the capacity and knowledge to sustainably operate the system. This output will also update the existing ICWM

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<sup>10</sup> The FMIS areas (Bagmati, Koshi, and Madhesh provinces) are selected since ADB is implementing sector projects in these three provinces since mid-1990s. Rajapur and Hill Lift areas are selected based on government request, past support of ADB in RIP, and recommendations of the ADB-supported [Water Resources Project Preparatory Facility](#).

<sup>11</sup> Based on the pilot hill lift irrigation systems in the project, the successful lessons, knowledge and technology could be used in upscaling implementation of similar hill lift irrigation systems in hundreds of potential *Tars* in the mid-hills. The government is ready with about 80 HLIPs in Trishuli corridor alone.

<sup>12</sup> The WRIDDs will support farmers in the initial establishment and registration of the WUCs through the cooperative units at the local level. Irrigation management functions will be supported by the WRIDDs and agribusiness functions supported by the agricultural knowledge centers. The Board of Directors of the WUCs will initially incorporate the key representatives of the WUA. The 20 pilot WUCs will initially include 12 hill lift, 3 terai FMIS, 2 hill FMIS, and 3 in the RIP). Subject to the results of the pilots and farmer interest, the WUC program would be upscaled to other sub-projects.

guidelines and prepare training modules which will incorporate design, management, sustainable financing for maintenance, financing for extension support, and develop climate change resilience. The executing agency will institutionalize the guidelines and training modules to strengthen capacity of irrigation and agriculture extension workers across Nepal. At the policy level, the project will develop a road map for the long-term strategy for investment and management of a sustainable and self-sufficient FMIS sector in Nepal. The detailed output is presented in Appendix 6.

**6. Output 3: Modern agriculture and value chain facilities introduced.** The output will introduce modern agriculture technologies, mechanization, WUA facilities, and climate-smart agriculture. Through demonstration and training, this output will help farmers in (i) adopting climate-smart agricultural practices to improve crop yield, quality, and production; (ii) adopting advanced agricultural technologies including modern farm machineries and equipment to enhance efficiency, productivity, and address labor shortages; (iii) increasing value addition through WUA facilities including crop collection, storage, and processing; and (iv) accessing inputs and marketing their agricultural produce. The project will support the establishment of digital advisory services which will provide farmers with information on weather, crop planning, availability of inputs, marketing, and agriculture advisory services. This will help improve farmers' operational efficiency, decision-making, and commercialization of their outputs. It will develop the digital system by utilizing already developed and operating systems in coordination with ongoing projects e.g., ADB-supported Nuts and Fruits in Hilly Areas Project,<sup>13</sup> government, and private agencies. The project will help selected WUAs and/or WUCs with agriculture machineries and build WUA facilities, e.g., farm product buying and selling shed, WUA office with meeting space, cold chamber, store, and digital information board.<sup>14</sup> At least 30% of WUAs will also be supported with modern farming machinery and facility through subsidized financing (50% cost sharing for additional agriculture machinery, and 15% cost sharing for construction of WUA facility). WUA and/WUC members will be trained in weather-sensitive, mechanized and climate smart agriculture practices and agriculture value chains services. The project aims to establish linkages with downstream government and private enterprises, rural financing agencies, and markets by constructing buying and selling centers in each subproject, providing digital support in linking with market, and facilitate access to financing for enterprise development. The detailed output is presented in Appendix 6.

## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

7. Feasibility studies for all subprojects are complete, and detailed designs for subprojects equivalent to 48% of the total costs of the civil works are prepared for advance contracting by the respective WRIDDs. The government and ADB supported technical assistance refined and strengthened the project design and due diligence assessments achieving a high level of project readiness. The status of project readiness is in Table 1Table 1. Advance contracting activities for selection of project implementation and management supervision (PIMS) consultant, and civil works are summarized in Table 2.

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<sup>13</sup> ADB. [Nepal: Nuts and Fruits in Hilly Areas Project](#).

<sup>14</sup> The WUA and/or WUC will be required to contribute 50% of the financing for machinery and 15% for WUA facilities, in compliance with government directives.

**Table 1: Project Readiness Activities**

	2024				2025	Responsible
	Q1	Q2	Q3	Q4	Q1	
<b>1. Obtain Overall Project Development Consent</b>		June				CPMO
<b>2. Recruit PIMS</b>						
EA and ADB Approval of cost estimate		May				ADB, CPMO
Call for EOI		May				CPMO
EOIs received and evaluated				Sep		CPMO
Obtain ADB no objection of EOI evaluation and shortlist				Oct		CPMO/ADB
Issuance of RFP				Oct		CPMO
Receive Proposals				Nov		CPMO
Receive EA evaluation report (technical proposal)				Dec		CPMO
Obtain ADB no objection (technical proposal)				Dec		ADB/CPMO
Obtain EAs approval (financial proposals)					Jan	CPMO
Obtain ADB no objection financial proposals)					Jan	ADB/CPMO
Negotiations and award of contract					Jan	CPMO
Consultant mobilization					Feb	PIMS
<b>3. Procure Advance Civil Works Packages (63 packages)</b>						
Advance subproject detailed designs and bid documents prepared and approved by the government		May				CPMO
EA and ADB clearance of bid documents		May				ADB
Issuance of invitation for bids by the EA (1S2E)		Jul				CPMO, WRIDDs
Receive bids and preparation of technical bid evaluation report (TBER) by EA				Oct		CPMO, WRIDDs
ADB no objection to TBER				Oct		ADB
Financial Bid Evaluation Report (FBER) by EA				Nov		CPMO
ADB approval of FBER*				Dec		CPMO
Contract signing and mobilization					Jan	CPMO
<b>4. Safeguard Documents</b>						
Finalize safeguards documents and obtain ADB no objection		May				CPMO, ADB
Public disclosure of safeguards documents as per requirements		Jun				CPMO, ADB
<b>5. Project Approvals</b>						
Project implementation arrangements in place (CPMO, CAMO, and PIUs fully staffed)				Oct		CPMO, CAMO, PIU
Government budget inclusion for 2024/2025		Jun				DWRI
Loan Negotiations			Sep			ADB
ADB Board Consideration				Oct		ADB
Loan Signing				Dec		MOF, MOEWRI, ADB
Loan Effective				Dec		MOF, MOEWRI, ADB

ADB = Asian Development Bank; CAMO = Central Agriculture Management Office; CPMO = Central Project Management Office; DWRI = Department of Water Resources and Irrigation; EA = executing agency; EOI = expression of interest; FBER = financial bid evaluation report; MOEWRI = Federal Ministry of Energy, Water Resources, and Irrigation; MOF = Ministry of Finance; PIMS = project management and implementation support consultants; PIU = project implementation unit; Q = quarter; RFP = request for proposal; TBER = technical bid evaluation report; WRIDD = Water Resources Irrigation Development Division.

\*ADB will only review and approve one package per province.

Source: ADB.

**Table 2: Advance Contracting Actions**

Date	Project Processing Milestone (ADB)	Advanced Procurement Activities		
		Project Implementation / and Management Support Consultants	Output 1: 40 Hill FMIS 21 Terai FMIS	Output 1: Rajapur Gated Intake, Geruwa Intake, River Training
Aug 2023	Concept paper approved			
Mar 2024		Draft TOR and costs EA approval		
Apr 2024	Fact-finding mission: prepare MOU and preliminary PAM		Detailed designs BOQ and specifications prepared	Detailed designs BOQ and specifications prepared
May 2024		Advertise EOIs		
Jul 2024	RRP and loan agreement sent to the Government of Nepal for Loan negotiations		EA and ADB Approval of bid documents  Invitation for bids	
Sep 2024	Loan Negotiations	EOI receipt and evaluation		EA and ADB Approval of bid documents
Oct 2024	Board approval	RFP Issued	Receive bids and technical evaluation and ADB no objection of TBER	Invitation for bids
Dec 2024	Loan signing	Receive proposals	EA Financial evaluation	Receive bids and technical evaluation and ADB no objection of TBER
Dec 2024	Loan effectiveness	EA technical evaluation report, and ADB no objection of technical proposal	ADB no objection of FBER	EA Financial evaluation
Jan 2025		EA financial evaluation report and ADB no objection of financial proposal, Negotiations and award contract	Contract signing and mobilization	ADB no objection of FBER
Feb 2025		Consultant mobilization		Contract signing and mobilization

ADB = Asian Development Bank, BOQ = bill of quantities, EA = executing agency, EOI = expression of interest, FBER = financial bid evaluation report, FMIS = farmer managed irrigation system, MOU = memorandum of understanding, PAM = project administration manual, RFP = request for proposal, RRP = report and recommendation of the President, TBER = technical bid evaluation report, TOR = terms of reference.

Source: ADB.

## **B. Overall Project Implementation Plan**

8. The overall project implementation plan is in Table 3 and the detailed plan in Appendix 6.



### III. PROJECT MANAGEMENT ARRANGEMENTS<sup>15</sup>

#### A. Project Implementation Organizations: Roles and Responsibilities

9. The executing agency at the Federal level will be the Ministry of Energy, Water Resources and Irrigation (MOEWRI). The implementing agencies at the federal level will be the Department of Water Resources and Irrigation (DWRI), and the Department of Agriculture (DOA) under the Ministry of Agriculture and Livestock Development (MOALD). A project steering committee (PSC) will be established and chaired by the Secretary MOEWRI. Two project management units will be established at the central level: (i) central project management office (CPMO) in DWRI, and (ii) central agriculture management office (CAMO) in the DOA.

10. At the provincial level, the implementing agencies will be the Directorate of Agriculture Development (DOAD) under the provincial ministries responsible for agriculture (in Koshi, Madhesh, Bagamati, Gandaki and Lumbini provinces) and the Physical Infrastructure Divisions of the provincial ministries responsible for irrigation development (Koshi, Madhesh and Bagamati provinces).<sup>16</sup> A total of 76 project implementation units (PIUs) will be established: four at the federal level (irrigation and river management office, Gorkha; peoples embankment office, Butwal for implementation of hill lift irrigation projects (HLIPs); Rajapur Irrigation Management Office [RIMO], and Rajapur Agriculture Management Office [RAMO] for RIP); and 72 in provincial level offices (respective WRIDDs in Koshi, Madhesh, and Bagamati Provinces for FMIS, and AKCs in Koshi, Madhesh, and Bagamati Provinces for FMIS, and Gandaki and Lumbini for HLIPs). Subproject Management Committees (SMCs) will be formed in each subproject to support the integrated development objectives of the project.<sup>17</sup> Project implementation and management support (PIMS) consultant will support both the project management units (PMU) and project implementation units (PIUs).

11. The project will be implemented in compliance with the Federal System of Governance in Nepal with the basic responsibility and accountability for selecting, preparing, and implementing FMIS subproject work by the province (with the exception of RIP and HLIP subprojects which will be implemented by the federal government). Technical backstopping and management support will be provided by the federal offices.

12. The overall project management will be led by the two PMUs—CPMO and CAMO.

13. At the provincial level, the project will be implemented through the PIUs under the respective implementing agencies as described below:

- (i) For the FMIS schemes, the implementation of civil works will be through the Provincial Governments of Koshi, Madhesh, and Bagamati. The project

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<sup>15</sup> ADB will support the implementation and institutional strengthening of the project through a technical assistance (TA) to be approved on the first quarter of 2025. It will provide institutional capacity building to DWRI and provinces to better streamline the FMIS sector strategy and roadmap towards its implementation. It will support building staff capacity at all levels of government. The TA will also provide international expertise on preparing for climate smart agriculture, design of lift irrigation systems, and developing digital support.

<sup>16</sup> These are (i) the Ministry of Agriculture and Livestock Development and the Ministry of Water Supply, Energy and Irrigation of Bagamati Province; (ii) the Ministry of Agriculture, Land Management and Cooperatives of Gandaki Province; (iii) the Ministry of Industry Agriculture and Cooperative and the Ministry of Water Supply, Irrigation and Energy of Koshi Province; (iv) the Ministry of Agriculture, Land Management and Cooperatives of Lumbini Province; and (v) the Ministry for Land Management, Agriculture and Cooperative and the Ministry of Energy, Irrigation and Water Supply of Madesh Province, or any successor of each of the foregoing ministries.

<sup>17</sup> A total of 113 subprojects at project processing stage.

- management responsibilities will be assigned to their WRIDDs.
- (ii) The implementation of the output 3 agriculture development plans (ADP) and relevant parts of output 2 institutional strengthening for all subprojects will be implemented through the concerned provincial ministries responsible for agriculture and irrigation through their AKCs and WRIDDs, respectively.

14. The key project implementation organizations are summarized as follows.

### 1. Project Steering Committee

15. **The Project Steering Committee:** Within 3 months of the loan effectiveness, a PSC will be established. The PSC will be chaired by the Secretary, MOEWRI. The members will include the representatives from the National Planning Commission, Ministry of Finance (MOF), Director Generals of DWRI and DOA; and secretary of the provincial ministries related with irrigation and agriculture. The Project Director, CPMO will be the member secretary of the PSC. Representatives from ADB will be invited as observers. The PSC is the main strategy guiding and supervisory body for the project and will meet at least once a year or as required.

### 2. Central Project Management Office

16. The CPMO will have cross-cutting responsibilities for managing all aspects of project implementation incorporating all three project outputs. A Project Director with at least the rank of joint secretary will lead the project and report to the Director General, DWRI. The Project Director will also liaise with the relevant line agencies including MOEWRI, MOALD, DOA; and WRIDDs and AKCs and their provincial ministries. The staff of the CPMO consists of personnel from DWRI. The CPMO will be supported by the PIMS and other individual specialists in the overall project implementation management.

17. The CPMO will consist of four support desks relating to the core project targets and responsibilities. The support desks will be managed by the Deputy Project Directors.

- (i) **Administration, Finance and Procurement Desk:** will liaise with different line agencies at federal, provincial, and district levels to: (a) prepare the annual work plan and budget; (b) ensure timely budgetary support to all implementing partners; (c) ensure all accounts are managed in accordance with agreed procedures; (d) manage the advance account and submit withdrawal applications to ADB, (e) manage fund flow and loan disbursement; (f) maintain supporting documents for all withdrawal applications sent to ADB; (g) orient PIUs on ADB requirements for SOE procedure, and centralize and maintain all project transaction records and supporting documents, and (h) liaise with the Office of the Auditor General. The desk will also ensure all procurement are in accordance with agreed procedures and support the procurement processes of the PIUs. The CPMO will be responsible for procurement of (a) consulting services, (b) project vehicles, and (c) equipment.
- (ii) **Infrastructure Desk:** will support PIUs in planning, designing, and supervising the construction of the FMIS, HLIP, and RIP subprojects.
- (iii) **Training, Institutions, and Communications Desk:** will be responsible for: (a) implementing the training and capacity development program for irrigation agencies at central, provincial, district, and local levels; (b) supporting the WRIDDs in strengthening the WUAs and forming WUCs in accordance with government legal provisions in the pilot subprojects; (c) establishing an effective

communication network for the project, and preparing and disseminating communications to the public about the project; and (e) supporting in the establishment of digital advisory systems for timely providing information for planning climate smart irrigated agriculture.

- (iv) **Project Benefit Monitoring and Evaluation and Safeguards Desk:** will ensure operationalizing, monitoring, and maintaining the project benefits, the environmental and social safeguards, Gender Equality and Social Inclusion (GESI) action plan, and grievance redress mechanism (GRM). It will make sure that they are implemented in accordance with the agreed procedures.

### 3. Central Agriculture Management Office

18. The CAMO will be established in the DOA. It will be led by a Gazetted Class II Level Senior Agriculture Officer (SAO). The CAMO will work closely with the CPMO and report to the Director General and Deputy Director General of DOA and share information with CPMO. The SAO will coordinate with the relevant line agencies including MOALD, Nepal Agriculture Research Council (NARC), provincial agriculture ministries, DOAD, AKCs, WRIDDs, RAMO, and WUAs/WUCs. The CAMO will be supported by the PIMS and other individual specialists.

19. The CAMO will have cross-cutting responsibilities for managing all aspects of ADP and agriculture institution development programs relating to outputs 2 and 3. The CAMO will consist of four support desks. Each support desk will be managed by a Gazetted Class III Level Officer.

- (i) **Administration Desk:** This Desk will be managed by a Gazetted Class III Level Account Officer and a Non-gazetted Class I Level Accountant of DOA. This Desk will liaise with different line agencies at federal, provincial, and local levels to: (a) prepare the annual work plan and budget; (b) ensure timely budgetary support to all ADP and agriculture institution development program implementing partners; (c) ensure AKCs have maintained all accounts in accordance with agreed procedures; (d) liaise with other relevant institutions, (e) collate and send all supporting documents for project expenditures from AKCs to CPMO, and (e) prepare comprehensive reports and monitoring and supervision of project activities at province and sub-project levels. The Desk will also ensure all procurement are in accordance with agreed procedures and support the procurement processes of PIUs (AKCs and RAMO). The AKC will be responsible for procurement of agriculture machinery and equipment needed for demonstrations and up-scaling support to WUAs.
- (ii) **Climate Smart Agriculture Technology and Management Desk:** This desk will be managed by a Gazetted Class III Level Agriculture Officer and a Non-gazetted Class I Level Junior Technician. This Desk will be responsible for: (a) establishing an effective communication and coordination mechanism with relevant agencies including NARC and its farms and centers for making arrangement of climate resilient source seeds, saplings, fertilizers, machineries, equipment, etc. (b) coordinating, supervising and supporting implementation of demonstrations at irrigation sub-project levels; (c) supporting AKCs in strengthening the WUAs/WUCs in agribusiness activities in accordance with Borrower's legal provisions in the pilot subprojects, and (d) preparing comprehensive reports and success stories, and monitoring and supervision of project activities at province and sub-project levels.

- (iii) **Training Institutions and Communications Desk:** It will be managed by a Gazetted Class III Level Agriculture Officer. This desk will be responsible for: (a) implementing the training and capacity development programs for agriculture agencies at central, provincial, and local levels and review and support training to farmers and WUAs; (b) establishing an effective communication network with relevant agencies for the preparation and dissemination of project activities, outputs and outcomes to the farmers and general public including the use of digital advisory services; and (c) collecting, compiling and documenting reports, preparing comprehensive reports and success stories, and monitoring and supervision of project activities at province and sub-project levels.
- (iv) **Agriculture Finance Desk:** This desk will be managed by a Gazetted Class III Level Agriculture Officer. This Desk will be responsible for: (a) facilitating WUA/WUC to initiate access to financial services; (b) conducting informative meetings, training sessions, and workshops on financial literacy tailored to the specific needs of WUAs/WUCs, covering essential topics such as budgeting, saving, and effective loan management; (c) monitoring and supervision, and preparing comprehensive reports and success stories showcasing the impactful utilization of financial services by WUAs/WUCs.

#### 4. Provincial Agencies

20. The Physical Infrastructure Divisions under the respective Provincial Ministry mandated to irrigation will be responsible for managing the work of the WRIDDs including monitoring the progress and quality of work in the subprojects and take corrective measures, as needed.

21. The DOAD offices under the respective provincial ministries mandated to agriculture development will be responsible for managing the ADP implementation through the respective AKCs. The ministries and DOAD will monitor the progress and quality of work in the subprojects and guide AKCs as required.

#### 5. Project Implementation Units

22. The PIUs will be responsible for the implementation of outputs 1 and 2. The PIUs will be supported by the CPMO, CAMO, and the consultants.

23. **WRIDDs:** The responsibilities of WRIDDs are presented in the following Table 4.

24. **Agriculture Knowledge Center and Rajapur Agriculture Management Office (in the Rajapur Irrigation Project).** The AKCs and the RAMO (in RIP) will support farmers and local government in implementing climate smart and modern agriculture activities under the ADPs. The responsibilities of AKCs are presented in the following Table 4.

25. **DWRI through their HLIP Implementing Agencies (project implementation units):** DWRI will be responsible to plan, design, and implement the 12 HLIPs.<sup>18</sup> They will implement the work through their PIUs established near the proposed HLIP sites. The subprojects will be developed through an integrated management approach with close involvement of the

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<sup>18</sup> PIUs for the 12 HLIPs will be the Irrigation and River Management Project, Gorkha and People's Embankment Office, Butwal.

WUAs/WUCs.

26. The PIUs will support farmers of HLIPs in establishing and registering the WUCs with the local cooperatives' offices or as appropriate. They will work closely with the AKCs to implement the ADPs.

27. The PIUs, with the support of DWRI, will train the respective provincial offices of WRIDDs and strengthen them to implement comparatively complex design and operation of the hill lift irrigation systems. They will also forward the statement of expenditures and the routine and periodic reports to CPMO.

28. The PMUs and PIUs will be supported by PIMS. Their responsibilities are presented in the following Table 4.

29. **The RIMO** is already established and will be the PIU for the civil works in RIP. The RIMO will also support the implementation of Output 2, including strengthening the WUA and piloting the establishment of the WUCs in each major branch canal. Responsibilities of the RIMO are presented in following Table 4.

30. **The RAMO** will be established by DOA/MOALD and will be the PIU for the component 3 works in RIP. The RAMO will also support the implementation of Output 2, including strengthening the WUA and piloting the establishment of the WUCs in each major branch canal. Responsibilities of the RAMO is presented in following Table 4.

## 6. Subproject Management Committees

31. **The SMCs** will be established in each subproject to coordinate among the stakeholders in an integrated development approach. The SMC will be led by the chief of the WRIDD or RIMO or HLIP office including engineers assigned to the subproject, Association Organizer of WRIDDs, AKC/RAMO Chief, WUA/WUC chairperson, representative from agriculture unit at the local level (AULL) and PIMS consultant as the members. Based on the agenda of the meeting, other relevant stakeholders could be invited, such as contractors, suppliers, and local body (urban/rural municipality) representatives. The SMC will meet quarterly or as required. A meeting register shall be kept for SMC meetings, and the agenda of the meeting and agreements shall be duly recorded in the registry and reported in the quarterly progress reports to CPMO and CAMO. The SMC will recommend subproject preparation report (feasibility report- SPPR) for the review and approval of the Project Appraisal Committee (PAC) at the federal level chaired by the Director General DWRI. At the SMC level, if all members are not present, the mandatory requirement is that at a minimum the subproject feasibility reports should be approved by at least the Chief of WRIDD/RIMO/HLIP office, AKC/RAMO, and WUA. Responsibilities of the RIMO are presented in following Table 4.

## 7. Subproject Level

32. **WUAs** will be the key stakeholder organizations at the subproject level. WUAs could be upgraded to WUCs.

33. The WUA will be formed through an election from a farmers' general assembly as recorded in their Charter and will liaise with WRIDDs for overall operation and maintenance of the irrigation system and for equitable water distribution. They will also be responsible for implementing community contracts and coordination for community contribution in labor.

34. The WUCs are registered as commercial entity in the local body (municipalities).<sup>19</sup> They will be responsible for undertaking agribusiness functions under cooperative mode (collective agriculture input and output trades, support in mechanization and modernization of irrigation system, networking with market and collective sale of produce, undertake saving and credit for seasonal farming, and provide market information). The WUCs in HLIPs would take on the full MOM functions and would effectively operate as a water utility for which they will be mandated through their constitution.

35. The establishment of the WUCs will be initially piloted in 20 selected subprojects (12 HILP, 3 Hill FMIS, 3 Terai FMIS, and 2 WUCs in the RIP). The WUA/WUCs will manage the 3-pilot community conjunctive groundwater activities.

36. A summary of the roles and responsibilities of the project implementation agencies is shown in Table 4.

**Table 4: Project Management Roles and Responsibilities**

Project Implementation Organization	Management Roles and Responsibilities
Project Steering Committee (PSC)	<ul style="list-style-type: none"> <li>• Provide guidance on policy, strategy, and directives;</li> <li>• Monitor overall progress and provide guidance and facilitation to ensure successful implementation of the project;</li> <li>• Provide key liaison between the different agencies at federal and provincial levels to ensure coordination and collaboration among relevant agencies;</li> <li>• Support in getting ministerial directives in consultation with provinces for resolutions of issues; and</li> <li>• Address any other key issues and constraints related to the project implementation.</li> </ul>
<b>Executing Agency:</b> MOEWRI through DWRI	<p><b>MOEWRI</b></p> <ul style="list-style-type: none"> <li>• Provide key liaison between the different agencies at federal and provincial levels related with irrigation and agriculture development;</li> <li>• Monitor overall progress and provide guidance to address constraints and ensure that the project targets are timely met;</li> <li>• Chair wrap-up of ADB project review missions and ensure implementation of agreed actions;</li> <li>• Ensure loan covenants are complied with;</li> <li>• Provide decision support to policy matters related with project implementation;</li> <li>• Ensure satisfactory safeguards implementation by the CPMO and the implementing agencies, review environmental and social safeguards monitoring reports, recommended corrective actions if needed, and monitor the implementation of these corrective actions by the CPMO and the implementing agencies.</li> <li>• Appoint Project Director at CPMO; and</li> <li>• Ensure adequate and timely budgetary support for the project.</li> </ul> <p><b>CPMO in DWRI:</b></p> <ul style="list-style-type: none"> <li>• Support in preparing project planning, and establish implementation, monitoring and evaluation mechanism;</li> <li>• Support to: (a) RIMO in implementing the RIP; and (b) the PIUs in Gorkha and Butwal in implementing HLIP;</li> <li>• Ensure strong coordination and communication among DWRI, DOA, and all relevant federal and provincial level stakeholders;</li> <li>• Manage procurement and contracts of the PIMS consultants and other individual consultants;</li> <li>• Monitor and report on both physical and financial progress;</li> <li>• Ensure satisfactory safeguards implementation as reflected in the environmental</li> </ul>

<sup>19</sup> Under the Cooperative Act 2017; farmer group registered at the agriculture unit of the local level

Project Implementation Organization	Management Roles and Responsibilities
	<p>assessment and review framework including initial environmental examination and/or EMP preparation, supervision of the EMP implementation, prepare environmental and social safeguards monitoring reports, recommended corrective actions if needed, and monitor the implementation of these corrective actions.</p> <ul style="list-style-type: none"> <li>• Monitor implementation of gender equality and social inclusion plan;</li> <li>• Prepare and update detailed project work plan and budget, and coordinate all other activities related to the annual program revision;</li> <li>• Implement training programs for project and subnational level staff;</li> <li>• Review and provide “no objection” on detailed design reports with cost estimates and bid evaluation reports for civil works;</li> <li>• Manage project advance accounts and submit withdrawal applications to ADB;</li> <li>• Centralize and maintain all project transaction records and supporting documents for all withdrawal application submitted to ADB;</li> <li>• Keep stakeholders informed of project progress and benefits;</li> <li>• Maintain communication and coordination with provincial irrigation and agriculture ministries;</li> <li>• Timely submission of quarterly progress report, semiannual (safeguard monitoring reports, annual project audit, and financial reports to ADB).</li> <li>• Facilitate PSC meetings as member secretary and keep record of meeting decision.</li> <li>• Update Irrigation system design manual, ICWM guidelines, and climate smart technologies for resilient irrigation system and climate smart agriculture.</li> </ul>
<p><b>Implementing Agency:</b> Ministry of Agriculture and Livestock Development (MOALD) through DOA</p>	<p><b>MOALD</b></p> <ul style="list-style-type: none"> <li>• Provide key liaison between the different agencies at federal and provincial levels related with agriculture and irrigation;</li> <li>• Monitor overall progress and provide guidance to address constraints related with ADP implementation and ensure that the project targets are timely met;</li> <li>• Participate in wrap-up of ADB’s project review missions and ensure implementation of agreed actions;</li> <li>• Ensure loan covenants related with agriculture are complied with;</li> <li>• Provide decision support to policy matters related with project implementation;</li> <li>• Give instruction to on-going relevant projects such as Prime Minister Agriculture Modernization Project, and ADB funded Nuts and Fruits in Hilly Area Projects, and Rural Enterprise Financing Project to collaborate with the project and explore areas of complementarity; and</li> <li>• Ensure adequate and timely budgetary support for the project.</li> </ul> <p><b>CAMO in DOA:</b></p> <ul style="list-style-type: none"> <li>• Support AKCs in planning, supervision, implementation, monitoring, and evaluation of the agricultural development plan and the integrated crop water management (ICWM) in all FMIS, and RAMO in RIP, and PIU Butwal and Gorkha in HLIP;</li> <li>• Prepare and update detailed work plan and budget for agricultural development and ICWM components;</li> <li>• Collate SOEs with supporting documents from AKCs/RAMO and forward to CPMO for preparing withdrawal applications;</li> <li>• Training of DOA/Province/AULL staff in implementing modernized and climate smart agriculture development and ICWM components;</li> <li>• Monitor, evaluate, and report on the effectiveness of the agricultural development and ICWM components;</li> <li>• Coordinate with federal, provincial, and local level offices in the implementation of agriculture development activities; and</li> <li>• Prepare guidelines and manuals, knowledge products, and audio-visuals on good practices established by the project.</li> </ul>
<p><b>Implementing Agencies at Provincial Level:</b></p> <p><b>a. Irrigation Ministry:</b> Koshi Province- Madhesh Province-</p>	<ul style="list-style-type: none"> <li>• Supervise quality implementation of Output 1 and Output 2 activities by WRIDDs;</li> <li>• Support training events conducted at provincial level;</li> <li>• Facilitate WRIDDs in timely initiating request for annual budget, preparing benefit monitoring and progress reports and statement of expenditures and forward to CAMO to initiate reimbursement;</li> <li>• Coordinate with provincial agriculture ministry on project implementation.</li> </ul>

Project Implementation Organization	Management Roles and Responsibilities
Bagamati Province- (through their Physical Infrastructure Division)	<ul style="list-style-type: none"> <li>• Prompt coordination with DWRI and CPMO to facilitate project implementation and obtain the projects objectives</li> <li>• Implement social and environmental safeguards (including Environmental Management Plans) in subproject areas and supervise/monitor civil works contracts and community contracted works.</li> </ul>
<b>b. Agriculture Ministry:</b> Koshi Province- Madhesh Province- Bagamati Province for FMIS; and Gandaki and Lumbini Province for HLIP  (through their Directorate of Agriculture Development)	<ul style="list-style-type: none"> <li>• Provide management support to AKCs to implement the ADP and the institutional development plans;</li> <li>• Support AKCs to implement related activities in Output 2 and Output 3;</li> <li>• Monitor and evaluate implementation progress in the project areas at provincial level;</li> <li>• Support training events conducted at provincial level;</li> <li>• Facilitate AKCs in timely initiating request for annual budget, preparing benefit monitoring and progress reports and statement of expenditures and forward to CAMO for initiate for reimbursement;</li> <li>• Coordinate with provincial irrigation ministry on project implementation;</li> <li>• In consultation and coordination with CAMO, design climate smart agriculture progress under ADP; and</li> <li>• Promote mechanization, communication and agri-enterprise development in subprojects.</li> </ul>
Water Resources and Irrigation Development Divisions (WRIDDs)	<ul style="list-style-type: none"> <li>• Selection of subprojects, survey and preparation of detailed designs of the remaining subprojects;</li> <li>• Procurement of civil works and supervise construction of the FMIS subprojects;</li> <li>• Work closely with the AKCs to support the establishment and implementation of new management initiatives for the subprojects including strengthening of WUAs and establishment and registration of the proposed pilot WUC</li> <li>• Ensure that all the necessary safeguards and GESI requirements are met and properly implemented.</li> <li>• Update the project MIS including project benefit monitoring and evaluation,</li> <li>• Complete other project related reports and provide information as and when required by CPMO.</li> <li>• Implement social and environmental safeguards (including Environmental Management Plans) in subproject areas and supervise/monitor civil works contracts and community contracted works.</li> <li>• Organize and hold SMC meetings.</li> <li>• Maintain separate project accounts and submit monthly statements of expenditures to CPMO along with all supporting documents; and</li> <li>• Submit work plans and budget proposals, DDRs, and variation orders to CPMO with the consent of concerned provincial ministry.</li> </ul>
Field Offices of DWRI for HLIP	<ul style="list-style-type: none"> <li>• Subsurface water availability exploration by boring and design of all HLIPs;</li> <li>• Design finalization of HLIP subprojects;</li> <li>• Implementation of the 12 HILP subprojects in addition to those if added later;</li> <li>• Establishment and development of the new WUA and WUCs to manage, operate, and maintain the irrigation systems as a water utility;</li> <li>• Support WUAs/WUCs in agribusiness functions;</li> <li>• Establishment of long-term sustainable cost recovery plan to meet MOM costs;</li> <li>• Development of high value and modernized agriculture systems, including soil moisture measurement, support irrigation scheduling and planning for cropping pattern, micro irrigation system, climate smart agriculture, and mechanization;</li> <li>• Work closely with AKCs for implementing ADPs;</li> <li>• Implementing the ADP with training and demonstrations;</li> <li>• Supporting upgrading WUAs of WUCs for pilot subprojects, including building the capacities for agribusiness;</li> <li>• Working closely with the WRIDDs to ensure the integration of irrigation and agriculture activities through the WUAs/WUCs;</li> <li>• Planning and coordinating with WUA for upscaling implementation of ICWM;</li> <li>• Implementing the upscaling program under the ADP; and</li> </ul>

Project Implementation Organization	Management Roles and Responsibilities
	<ul style="list-style-type: none"> <li>• Maintaining separate project accounts and submit monthly statements of expenditures to CPMO along with all supporting documents;</li> <li>• Provide training and capacity building to the WUAs and WUCs</li> <li>• Ensure that all the necessary safeguards and GESI requirements are fully complied with and implemented as per the safeguards management plans;</li> <li>• Implement social and environmental safeguards (including Environmental Management Plans) in subproject areas and supervise/monitor civil works contracts and community contracted works.</li> <li>• Regularly update the project MIS including project benefit monitoring and evaluation (PBME) system, complete other project related reports, and provide information as and when required by CPMO;</li> <li>• Organize and hold Subproject Management Committee (SMC) meetings at least every quarter or as and when required. SMC registry will be maintained to record meeting agenda and agreements reached. These will be reported in the quarterly progress reports; and</li> <li>• Submit work plans and budget proposals, due diligence reports (DDRs), and variation orders to CPMO with the consent of concerned provincial ministry.</li> </ul>
Rajapur Irrigation Management Office (RIMO)	<ul style="list-style-type: none"> <li>• Study and verify the detailed designs of the system;</li> <li>• Ensure that all the necessary safeguards requirements are fully complied with and reported as per the safeguards management plans;</li> <li>• Regularly update the project MIS including PBME system and complete other project related reports and provide information as and when required by CPMO;</li> <li>• Procurement of civil works, supervise construction, and contract management;</li> <li>• Support in strengthening of the WUAs and pilot the establishment of the proposed WUC;</li> <li>• Ensure that all the necessary safeguards and GESI requirements are met and reported;</li> <li>• Implement social and environmental safeguards (including Environmental Management Plans) in subproject areas and supervise/monitor civil works contracts and community contracted works.</li> <li>• Update the project MIS including project benefit monitoring and evaluation;</li> <li>• Complete other project related reports and provide information as and when required by CPMO;</li> <li>• Organize and hold SMC meetings at least quarterly or as and when required.</li> <li>• Maintain project accounts separately and submit monthly statements of expenditures to the CPMO;</li> <li>• Working closely with the RAMO to support in establishment and implementation of new management initiatives for the subprojects, including strengthening of the WUA and establishment and registration of WUC;</li> <li>• Submit work plans and budget proposals, DD Rs, and variation orders to CPMO; and</li> <li>• Provide training and capacity building of the WRIDDs.</li> </ul>
Agriculture Knowledge Centers (AKCs) / RAMO	<ul style="list-style-type: none"> <li>• Planning and implementing the ADP of the subprojects by working jointly with the farmers and the WUA and WUCs;</li> <li>• Work closely with the WRIDD/RIMO and HILP project offices to support the implementation of the institutional strengthening activities;</li> <li>• Provide training and capacity building to the farmers and AULL;</li> <li>• Selection and procurement of equipment for demonstrating modern agricultural practices, opportunities, and benefits;</li> <li>• Implement the climate smart ADP programs with training and demonstrations;</li> <li>• Support the establishment of WUCs in pilot subprojects, including building the capacities for agribusiness;</li> <li>• Work closely with the WRIDDs/RAMO to ensure the integration of irrigation and agriculture activities through the WUA/WUCs;</li> <li>• Planning and coordinating with WUA for upscaling implementation of ICWM;</li> <li>• Implement the upscaling program under the ADP; and</li> <li>• Maintain project accounts separately and submit monthly statements of</li> </ul>

Project Implementation Organization	Management Roles and Responsibilities
	expenditures to the CAMO along with all supporting documents.
Subproject Management Committees (SMC)	<ul style="list-style-type: none"> <li>• Coordinate the integrated development of the subproject including civil works, safeguards, subproject management, institutions, and agriculture;</li> <li>• Maintain communication and coordination with provincial ministries of irrigation and agriculture;</li> <li>• Participate in joint walkthrough of irrigation systems with WRIDDs at prior, during, and completion of construction, and support WRIDD to handover the system to farmers;</li> <li>• Recommend subproject preparation report (SPPR) for Project Appraisal Committee (PAC) approval with mandatory recommendation by at least the Chief of WRIDD, AKC/RAMO, HLIP offices and WUA;</li> <li>• Coordinate with relevant stakeholders and resolve field level issues</li> <li>• Review WUA/WUC request for agriculture machinery and WUA facility. Evaluate the request based on prescribed criteria and forward for PIMS review and recommendation to CAMO for clearance.</li> </ul>
Agriculture Unit at the Local Level (AULL)	<ul style="list-style-type: none"> <li>• Work closely with the AKCs to prepare and implement the ADP and institutional strengthening activities;</li> <li>• Work closely with the WUA/WUCs to plan the ADPs;</li> <li>• Provide land for construction of WUA facility;</li> <li>• Support in raising irrigation service fee by policy support and if possible by making it a part of annual property tax collection;</li> <li>• Coordinate with WRIDD or relevant structure at district level through attending trimester SMC meetings; and</li> <li>• Participate in test-run of the completed Survey of ISPs and participate in capacity and knowledge base training organized by the project.</li> </ul>
Water Users Associations (WUAs) / Water User Cooperatives (WUC)	<ul style="list-style-type: none"> <li>• Responsible for implementing community contract and coordination for community contribution in labor;</li> <li>• Estimate water use tariff rate, agree during farmer's general assembly and raise irrigation service fee;</li> <li>• Coordinate with AULLs and AKCs in implementing the ADPs;</li> <li>• Support for project construction works including community procurement through the WUA;</li> <li>• Ensure efficient and sustainable MOM of the irrigation facilities;</li> <li>• Take on the full MOM functions and effectively operate as a water utility; and</li> <li>• Develop agribusiness functions to maximize productivity and climate resilient agriculture.</li> </ul>
District Administration Office	<ul style="list-style-type: none"> <li>• Addresses grievances regarding abuse of authority or misuse of conducts and resolve the issue for efficient project implementation.</li> <li>• Support in raising ISF collection, as appropriate</li> </ul>
Asian Development Bank	<ul style="list-style-type: none"> <li>• Overall supervision and advisory support;</li> <li>• Conduct regular project review missions and keep Saudi Fund for Development informed of the findings and action plan agreed;</li> <li>• Monitor and review overall project implementation in consultation with CPMO and CAMO, including: <ul style="list-style-type: none"> <li>• the project implementation schedule;</li> <li>• actions required in terms of poverty reduction, environmental impacts, and social safeguards as applicable;</li> <li>• timeliness of budgetary allocations and counterpart funding;</li> <li>• progress with procurement and disbursement, project expenditures, submission of statement of expenditure, when applicable, along with all supporting documents; and timely follow-up for submission of APFS;</li> <li>• compliance with particular loan covenants; and</li> <li>• the likelihood of attaining the project's immediate development objectives.</li> </ul> </li> </ul>
Saudi Fund for Development	<ul style="list-style-type: none"> <li>• Monitor and review project implementation in consultation with the borrower and ADB.</li> </ul>

ADB = Asian Development Bank; ADP = Agriculture Development Plan; AKC = agriculture knowledge center; AULL =

agriculture unit at the local level; CAMO = Central Agriculture Management Office; CPMO = Central Project Management Office, DDR = due diligence report; DOA = Department of Agriculture; DWRI = Department of Water Resources and Irrigation; EMP = environmental management plan; FMIS = farmer-managed irrigation system; GESI = gender equality and social inclusion; HLIP = Hill Lift Irrigation Project, ICWM = integrated crop water management; MIS = management information system; MOEWRI = Ministry of Energy, Water Resources and Irrigation; MOM = management, operation, and maintenance; PAC = project appraisal committee; PIMS = project implementation and management support; PIU = project implementation unit; PSC = project steering committee; RAMO = Rajapur Agriculture Management Office; RIMO = Raiapur Irrigation Management Office; WRIDD = Water Resource and Irrigation Development Division, WUA = water users association, WUC = water users cooperative.

Source: Asian Development Bank.

**Table 5: Consultant Roles and Responsibilities**

Consultant	Primary Roles and Responsibilities
PIMS Consultant	<p>The PIMS will provide management support to all the three project outputs and will work in coordination with the national and international specialists, recruited as individual consultants. They will:</p> <ul style="list-style-type: none"> <li>• strengthen and facilitate project management and implementation by establishing on-line project management information system;</li> <li>• prepare and operationalize online PBME system , and operating automated safeguards monitoring system, asset management system etc.</li> <li>• strengthen the institutional and operational capacity of the executing and implementing agencies;</li> <li>• support in the design, supervision and monitoring of rehabilitation and construction of irrigation systems that include rehabilitation of 100 plus FMIS, 12 plus hill lift irrigation system, and rehabilitation and upgrading of Rajapur Irrigation Project;</li> <li>• assist with EARF and EMP implementation, supervision and monitoring including IEE/EMP preparation for remaining subprojects;</li> <li>• assist the with resettlement framework, resettlement plan, and involuntary resettlement due diligence report implementation for HLIPs;</li> <li>• support for Institutional Development Plan;</li> <li>• Prepare FMIS sector development strategy and road map, FMIS design manual, and update ICWM guidelines;</li> <li>• support in preparation and implementation of Agricultural Development Plan;</li> <li>• support project implementation units in maintaining separate project accounts and submit monthly statements of expenditures along with all supporting documents; and</li> <li>• Provide institutional strengthening training to project staff and farmers/WUAs.</li> </ul>

EARF = environmental assessment and review framework, EMP = environmental management plan, FMIS = farmer managed irrigation system, HLIP = hill-lift irrigation project, ICWM = integrated crop water management, IEE = initial environmental examination, PBME = project benefit monitoring and evaluation, PIMS = project implementation management support, WUA = water users association.

Source: Asian Development Bank.

## B. Key Persons Involved in Implementation

### Executing Agency

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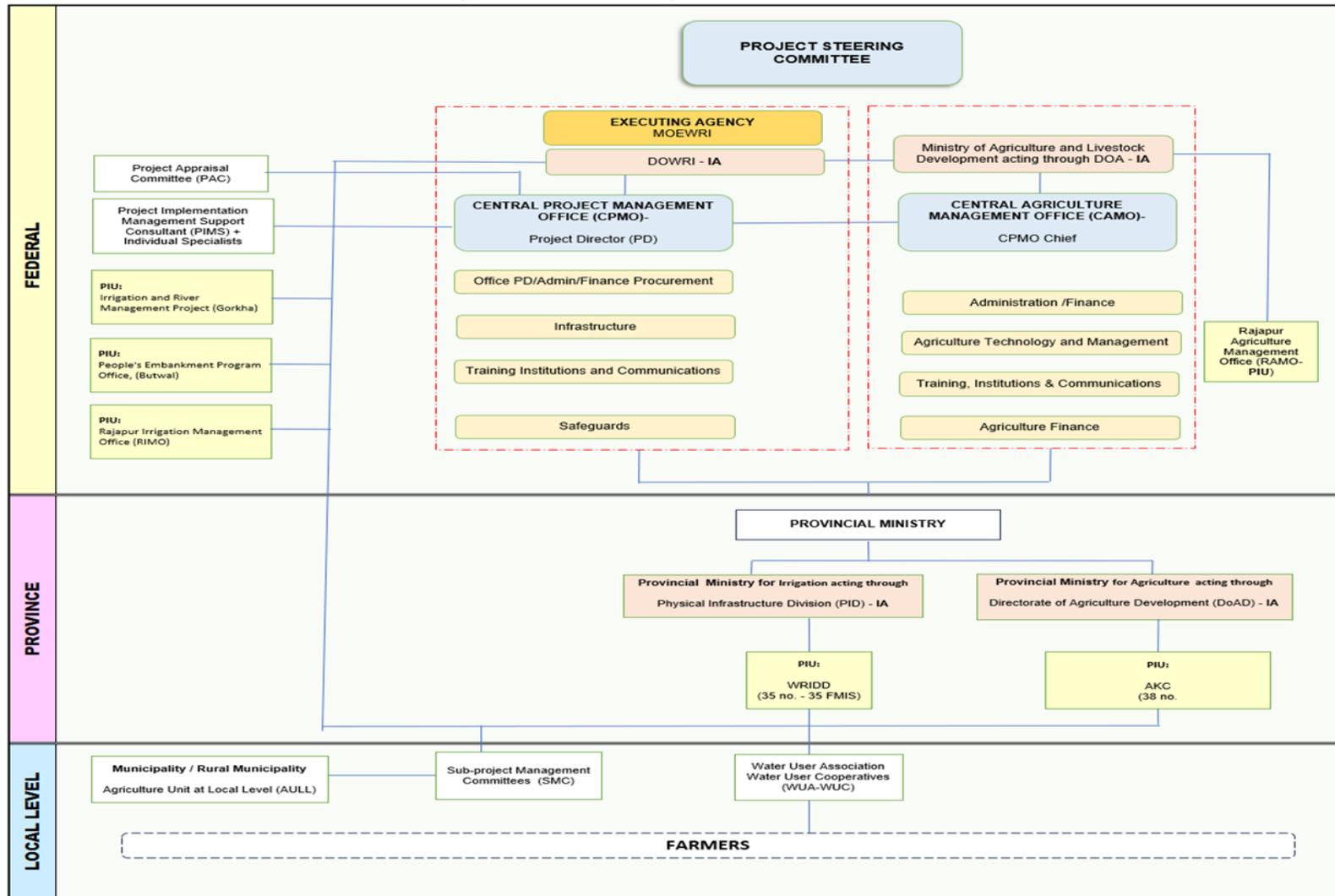
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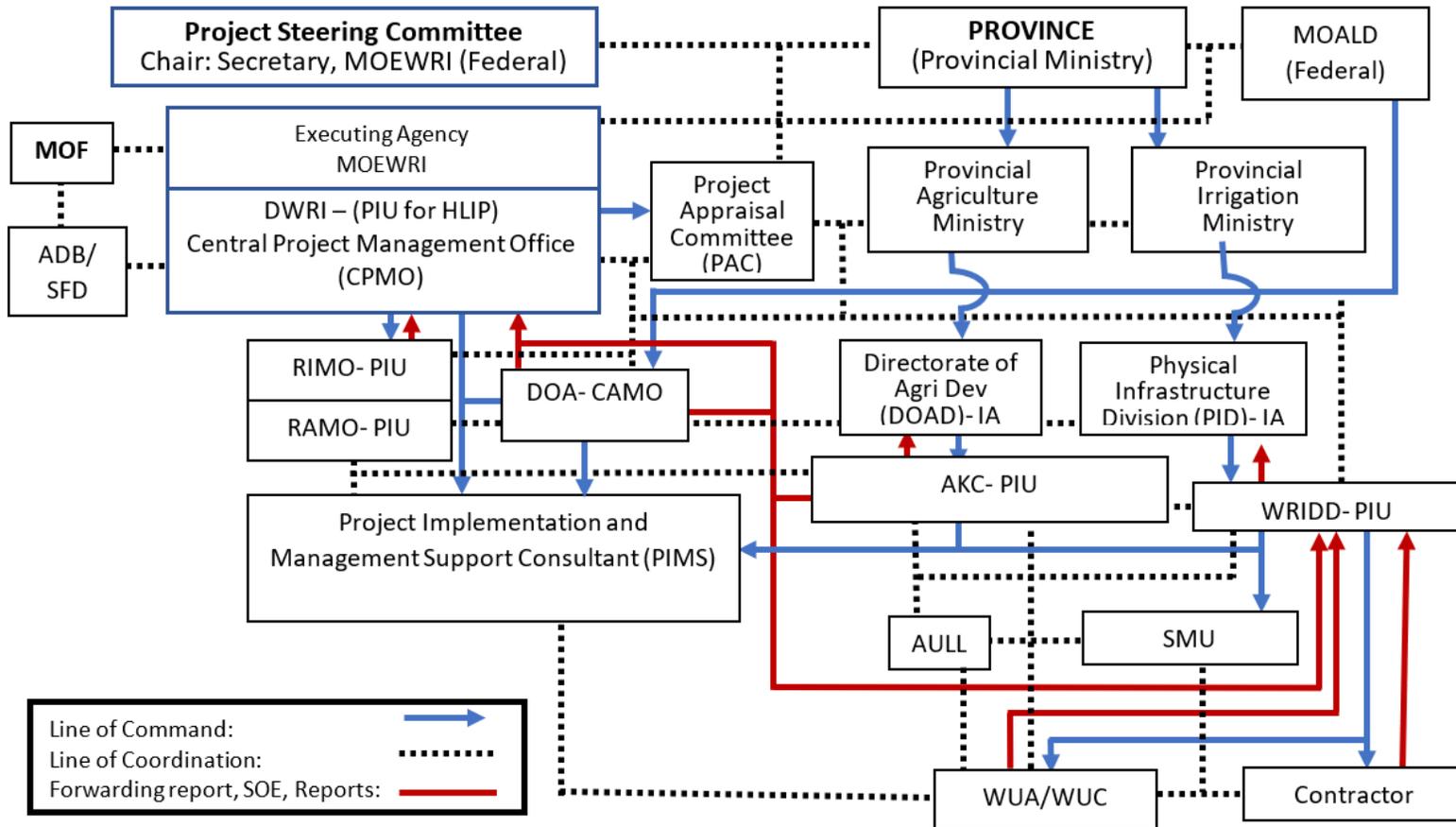
C. Project Organization Structure

Figure 1: Overall Organizational Structure



Note: See Figure 2 for abbreviation information.  
 Source: Ministry of Energy, Water Resources, and Irrigation.

Figure 2: Detailed Organizational Structure



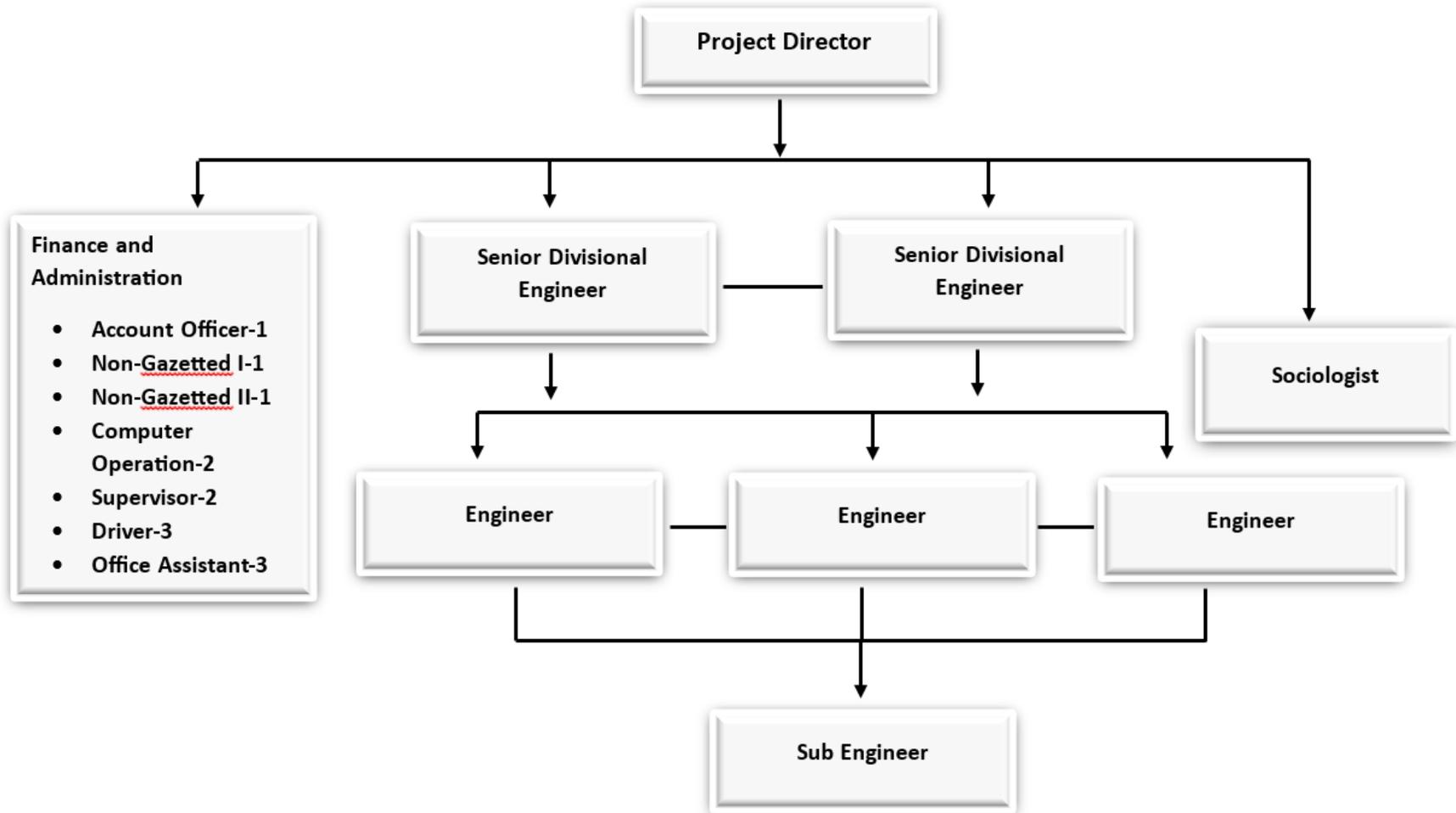
Note: WRIDD directly submits EOT, BER, SOE, VO to CPMO with a copy to their reporting Division in the Province; and Agriculture Knowledge Center to CAMO/DOA with a copy to DOAD of the province.

AULL = Agriculture Unit at Local Level; AKC = Agriculture Knowledge Center; CAMO= Central Agriculture Management Office; CO = Community Organizer; DOA = Department of Agriculture; DOAD= Directorate of Agriculture Development; HLIP = Hill Lift Irrigation Project; MEWRI= Ministry of Energy, Water Resources and Irrigation; MOALD= Ministry of Agriculture and Livestock Development; PAC = Project Appraisal Committee; PIMS = Project Implementation Management and Support Consultant; PIU = Project Implementation Unit; RAMO = Rajapur Agriculture Management Office; RIMO = Rajapur Irrigation Management Office; SFD = Saudi Fund for Development; SMU = Subproject Management Unit; WRIDD = Water Resources and Irrigation Development Division; WUA = Water Users Association; WUC = Water Users Cooperative.

**Table 6: Staffing of the Central Project Management Offices and the Project Implementation Units**

	Position	Level	Unit	No. of Months (a)	Positions /Unit (b)	No. of Offices ©	Total No. of Expert d=b*c	Total (a*d)
<b>A</b>	<b>Central Project Management Office (CPMO)</b>							
1	Gaz.I Level Officer	Gaz.I	pm	72	1	1	1	72
2	Gaz.II Level Officer	Gaz.II	pm	72	3	1	3	216
3	Gaz.III Level Officer	Gaz.III	pm	72	5	1	5	360
4	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	72	7	1	7	504
<b>B</b>	<b>Central Agriculture Management Office (CAMO)</b>							
1	Gaz.II Level Officer	Gaz.II	pm	50	1	1	1	50
2	Gaz.III Level Officer	Gaz.III	pm	50	4	1	4	202
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	50	5	1	5	252
<b>C</b>	<b>Hill Lift Project Implementation Unit</b>							
1	Project Manager	Gaz.II	pm	72	1	2	2	144
2	Engineer	Gaz.III	pm	72	2	2	4	288
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	72	2	2	4	288
<b>D</b>	<b>Rajapur Irrigation Management Office</b>							
1	Project Manager	Gaz.I	pm	36	1	1	1	36
2	Senior Divisional Engineer	Gaz.II	pm	36	2	1	2	72
3	Engineers	Gaz.III	pm	36	2	1	2	72
4	Support Staffs (Administration, Computer, Driver & Office Assistant)	and no level	pm	36	4	3	12	432
<b>E</b>	<b>Rajapur Agriculture Management Office</b>							
1	Senior Agriculture Officer	Gaz.II	pm	36	1	1	1	36
2	Agriculture Officers	Gaz.III	pm	36	2	1	2	72
3	Junior Technicians	pm	pm	36	2	1	2	72
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	36	4	1	4	144
<b>F</b>	<b>Physical Infrastructure Division (Irrigation)</b>							
1	Project Director, Province Irrigation	Gaz.II	pm	22	1	3	3	65
2	Engineer	Gaz.III	pm	22	1	3	3	65
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	22	4	3	12	259
<b>G</b>	<b>Directorate of Agriculture Development under MOLMAC</b>							
1	Project Coordinator (Agriculture Extension Officer)	Gaz.II	pm	22	1	3	3	65
2	Crop Development Officer	Gaz.III	pm	22	1	3	3	65
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	22	4	3	12	259
<b>H</b>	<b>WRIDD/SD</b>							
1	Senior Irrigation Officer/Engineer	Gaz.II	pm	22	1	35	35	756
2	Engineer	Gaz.III	pm	22	1	35	35	756
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	22	6	35	210	4536
<b>I</b>	<b>Agriculture Knowledge Center</b>							
1	Senior Agriculture Officer	Gaz.II		29	1	38	38	1094
2	Agriculture Officer	Gaz.III		29	1	38	38	1094
3	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	29	5	38	190	5472
<b>J</b>	<b>Irrigation and Agriculture Staff at Local Level</b>							
1	Agriculture Officer		pm	4	1	80	80	288
2	Support Staffs (Administration, Computer, Driver & Office Assistant)	Non Gaz 1 and no level	pm	4	3	80	240	864

Figure 3: Central Project Management Office Organizational Chart



Source: Department of Water Resources and Irrigation.

#### IV. COSTS AND FINANCING

##### A. Cost Estimates Preparation and Revisions

37. The project is estimated to cost \$133.64 million (Table 7).

**Table 7: Summary Cost Estimates**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Output 1: Irrigation infrastructure modernized	84.07
2. Output 2: Capacity of irrigation and agriculture agencies and farmer organizations strengthened	3.01
3. Output 3: Modern agriculture and value chain facilities introduced	10.30
Project management	8.67
<b>Subtotal (A)</b>	<b>106.05</b>
<b>B. Contingencies<sup>c</sup></b>	<b>20.96</b>
<b>C. Financial Charges During Implementation<sup>d</sup></b>	<b>6.63</b>
<b>Total (A+B+C)</b>	<b>133.64</b>

Note: Figures may not sum due to rounding.

<sup>a</sup> Includes taxes and duties of \$10.33 million to be financed by the government in cash.

<sup>b</sup> In mid-2024 prices as of April 2024.

<sup>c</sup> Physical contingencies computed at 10% for all activities except for training, agriculture facilities, consultants and project management which are computed at 5%. Price contingencies computed at 1.8% in 2024 to 2027, 1.9% in 2028 and 2029 and 2.0% thereafter for foreign currency costs; and 6.5% in 2024 and 6.0% per year thereafter for local currency costs; conversion between currencies assumes purchasing power parity. Physical contingencies computed at 5% for all activities except for training, agriculture facilities, consultants and project management which are computed at 5%. Price contingencies computed at 1.8% in 2024 to 2027, 1.9% in 2028 and 2029 and 2.0% thereafter for foreign currency costs; and 6.2% in 2024 and 6.0% per year thereafter for local currency costs; conversion between currencies assumes purchasing power parity.

<sup>d</sup> Includes interest, commitment, and other charges on all financing sources.

Source: Asian Development Bank.

38. The government has requested (i) a concessional loan of \$85 million from ADB's ordinary capital resources. The loan will have a 32-year term, including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% per year thereafter, and such other terms and conditions set forth in the draft loan and project agreements.

39. The government has also requested a loan not exceeding \$30 million from the Saudi Fund for Development (SFD) to help finance the project. The SFD loan will have an indicative 25-year term, including a grace period of 5 years, an interest rate of 2% per annum; and other terms and conditions to be set forth in the draft loan agreement between the government and SFD. ADB will partially administer the SFD loan (procurement services, and review of withdrawal applications and financial reports).<sup>20</sup>

40. The summary financing plan is in Table 8. ADB together with the SFD will finance the expenditures in relation to civil works, MOM, equipment, consulting services, and capacity building. The government will finance 12.08% of the project cost including taxes and duties. Beneficiaries will finance 2% of the project from contributions to civil works and on-farm investments.

<sup>20</sup> For partially administered SFD loans, ADB will review withdrawal applications (WA) in accordance with ADB's Loan Disbursement Handbook and advise SFD to execute the necessary payments directly to the government.

**Table 8: Summary Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (concessional loan)	85.00	63.60
Saudi Fund for Development <sup>a</sup> (loan)	30.00	22.45
Government <sup>b</sup>	16.14	12.08
Beneficiaries <sup>c</sup>	2.50	1.88
<b>Total</b>	<b>133.64</b>	<b>100.00</b>

<sup>a</sup> Partially administered by the Asian Development Bank.

<sup>b</sup> Excludes in-kind contributions by the government for staff salaries and office expenses, which are shared across multiple projects and not allocated to the project. The salaries and allowances of the permanent government staff who will support the project will be provided in kind and have not been incorporated in the costs; these come to a total of \$6.8 million; the government will also provide office space, utilities and transport for government staff.

Includes taxes amounting to \$10.33 million, which will be paid by the government in cash.

<sup>c</sup> The total beneficiary contribution is \$4.70 million of which \$2.50 million will be the beneficiary contribution for construction of the FMIS Hill and Terai Schemes which will be in kind through provision of unskilled labor and has not been included in the cost tables. The remaining beneficiary contribution of \$2.2 million will primarily be in cash and has been included in the cost tables. This includes procurement of advanced on-farm irrigation, pilot groundwater, agricultural machinery and agriculture facilities. The procurement process will be by competitive tender or through community procurement (for small packages as per the procurement plan). For each contract, the beneficiary contribution is defined and included in the bill of quantities and cost estimates with the share of costs between the government and beneficiaries clearly set out.

Source: Asian Development Bank.

## B. Key Assumptions

41. The following key assumptions underpin the cost estimates and financing plan:
- Exchange rate: Nepal Rupee 130.00 = \$1.00 (as of 1 April 2024).
  - Price contingencies based on expected cumulative inflation during implementation are in Table 9.

**Table 9: Escalation Rates for Price Contingency Calculation**

<b>Item</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>Average</b>
Foreign rate of price inflation	1.8%	1.8%	1.8%	1.8%	1.9%	1.8%
Domestic rate of price inflation	6.5%	6.0%	6.0%	6.0%	6.0%	6.1%

Source: Asian Development Bank.

- In-kind contributions that are intangible and cannot be easily measured and have not been quantified.
- Physical contingencies were calculated at 10% for civil works, environment and social mitigation, mechanical and equipment, and 5% for training and capacity development, agriculture facilities, consultant support and project management.

## C. Allocation and Withdrawal of Loan Proceeds

**Table 10a: Allocation and Withdrawal of Loan Proceeds – ADB concessional loan**

<b>Category</b>	<b>Item<sup>a</sup></b>	<b>Total Amount Allocated (\$)</b>	<b>Basis for Withdrawal from the Loan Account</b>
1	Civil Works - Hill and Terai FMIS	40,571,017	99.2% of total expenditure claimed*
2	Civil Works - Rajapur (Stage 1) Contracts	10,146,566	100% of total expenditure claimed *
3	Mechanical and equipment	2,042,334	55.4% of total expenditure claimed*

Category	Item <sup>a</sup>	Total Amount Allocated (\$)	Basis for Withdrawal from the Loan Account
4	Training and capacity building	4,083,245	78.8% of total expenditure claimed*
5	Agricultural facilities	3,309,813	83.4% of total expenditure claimed *
6	Consultant support	3,412,981	100% of total expenditure claimed*
7	Recurrent costs	2,407,771	50% of total expenditure claimed*
8	Financing charges	3,870,331	100% of the total amount due
9	Unallocated	15,155,942	
	Total	<b>85,000,000</b>	

\* Exclusive of taxes and duties imposed within the territory of the Borrower.  
Source: Asian Development Bank estimates.

**Table 10b: Allocation and Withdrawal of Loan Proceeds – SFD loan**

Category	Item <sup>a</sup>	Total Amount Allocated (\$)	Basis for Withdrawal from the Loan Account
1	Civil works - Hill Lift & Rajapur (Stage 2) Contracts	24,534,073	100% of total expenditure claimed*
2	Mechanical and equipment	273,056	7.3% of total expenditure claimed*
3	Financing charges	2,617,751	100% of the total amount due
4	Unallocated	3,575,120	
	Total	<b>30,000,000</b>	

\* Exclusive of taxes and duties imposed within the territory of the Borrower.  
Source: Asian Development Bank estimates.

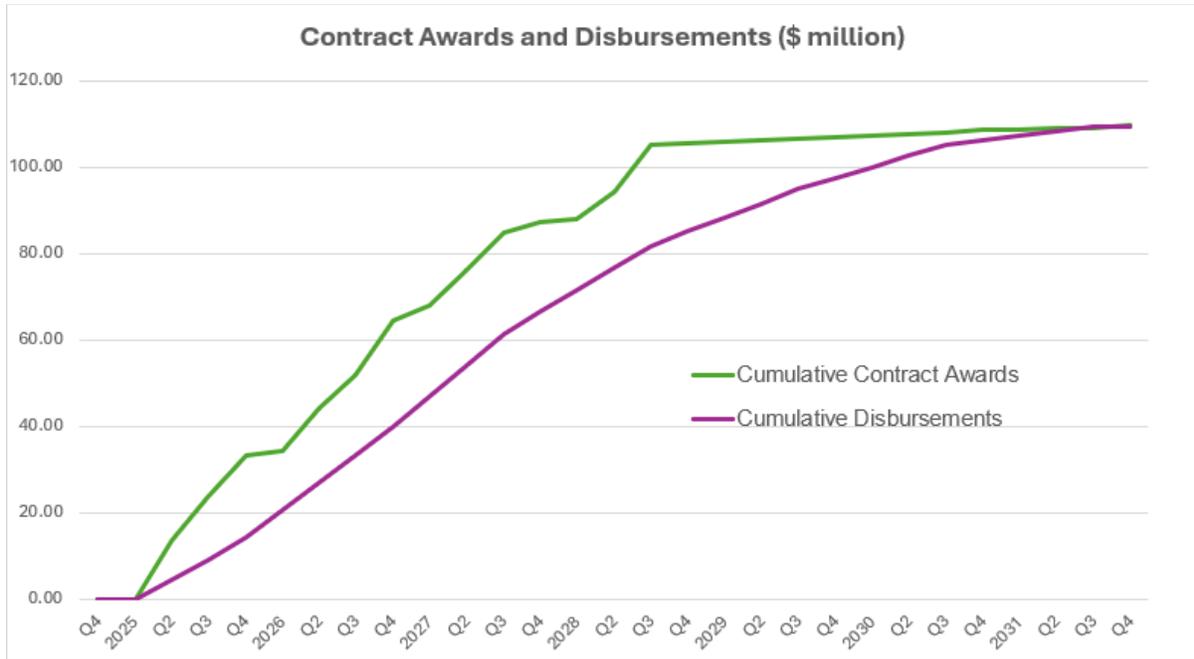
#### D. Contract and Disbursement S-Curve

**Table 11: Contract Awards and Disbursements**  
(\$ million)

	Contract Awards (\$ million)					Disbursement (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2024					0.00					0.00
2025	13.43	10.19	9.77	1.04	34.44	0.00	4.32	4.59	5.53	14.44
2026	9.80	7.58	12.75	3.58	33.72	6.21	6.21	6.21	6.83	25.46
2027	7.75	8.80	2.52	0.65	19.72	7.11	7.11	7.11	5.36	26.69
2028	6.44	10.75	0.43	0.29	17.91	5.02	5.02	5.02	3.59	18.65
2029	0.60	0.08	0.60	0.08	1.36	3.22	3.22	3.22	2.66	12.32
2030	0.60	0.40	0.54	0.02	1.55	2.54	2.54	2.54	1.12	8.74
2031	0.52	0.00	0.52	0.00	1.05	1.02	1.03	1.03	0.36	3.44
TOTAL					109.74					109.74

Source: Asian Development Bank.

**Figure 4: Contract Awards and Disbursements S-Curve**

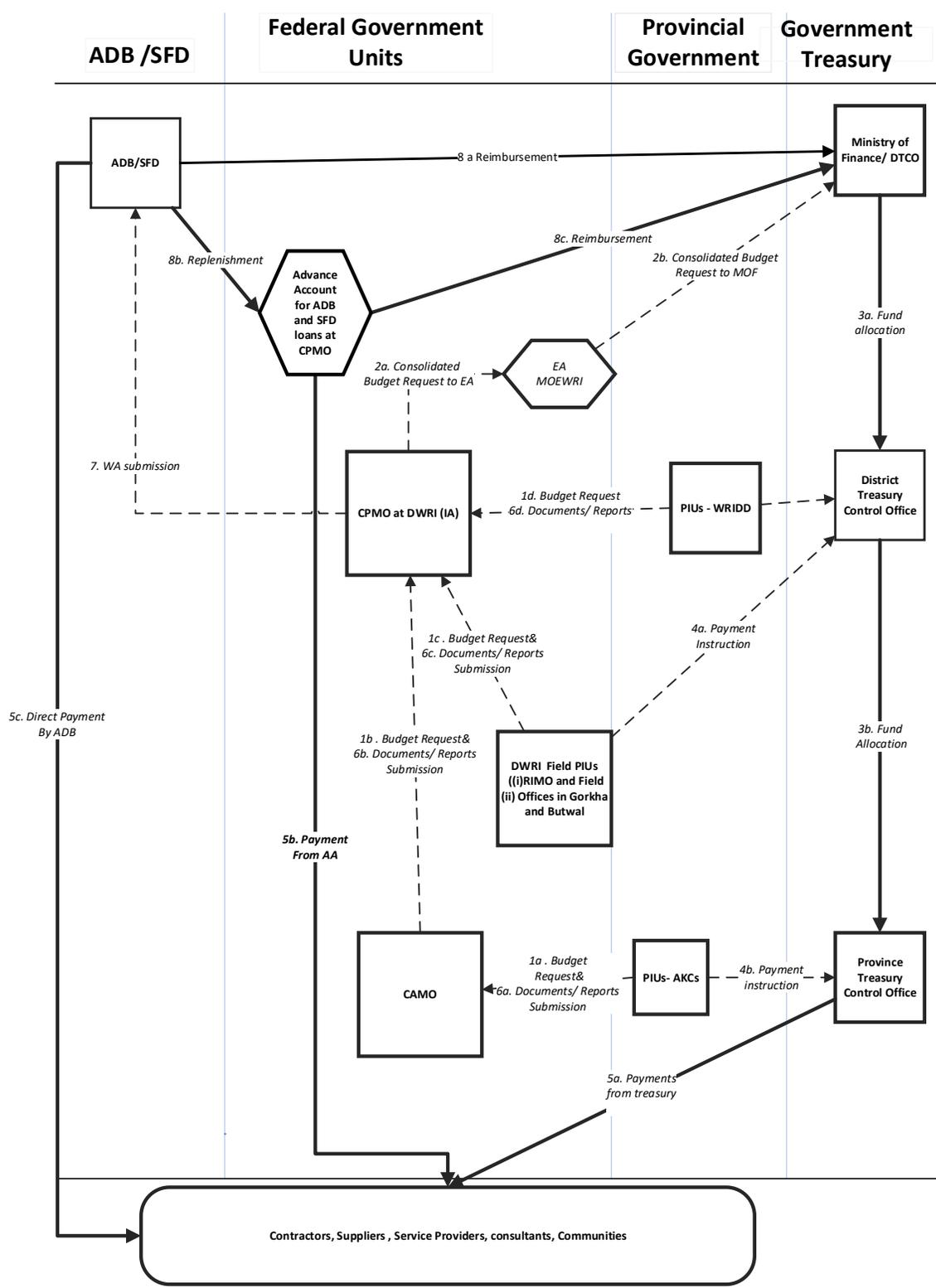


Source: Asian Development Bank.

**E. Fund Flow Diagram**

42. The fund flow diagram is shown in Figure 5. below.

Figure 5. Fund Flow Diagram



Legend:

Flow of Funds =   
 Flow of documents = 

AA = advance accounts (imprest account); ADB = Asian Development Bank; AKC= Agriculture Knowledge Centre; CAMO = Central Agriculture Management Officer; CPMO = Central Project Management Office; DWRI = Department of Water Resource and Irrigation; DOA = Department of Agriculture; DTCO = District Treasurer Controller Office; FGCO = Financial General Comptroller Office; MOF = Ministry of Finance; MOEWRI = Ministry of Energy, Water Resources, and Irrigation; NPC = National Planning Commission; NRB = Nepal Rastra Bank; PPCD = Plan Program and Coordination Division; PIU = Project Implementation Unit; PTCO = Province Treasury Control Office; RIMO = Rajapur Irrigation Management Office; SFD = Saudi Fund for Development, WRIDD = Water Resource and Irrigation Development Division.

## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

43. The financial management assessment (FMA) was conducted between December 2022 and March 2024 following ADB's guidance. The FMA assessed the financial management arrangements of the (i) DWRI, (ii) DOA, (iii) five provincial agriculture ministries, and (iv) four provincial water and irrigation ministries, along with sample WRIDDs and AKCs.<sup>21</sup> The assessment included fund flow, staffing, accounting policies and procedures, financial reporting and monitoring, internal and external auditing arrangements and financial information systems, and the sufficiency of the financial management arrangements for implementing the project. The overall pre-mitigation financial management risk of the project is *substantial*. Based on the assessment the key financial management risks identified are (i) highly decentralized implementation arrangement, necessitating fund flow and expenditure management at several agencies; (ii) no prior experience in managing ADB projects for some provincial PIUs; (iii) frequent transfer of account staffs; and (iv) weak internal audit arrangements. These risks will be mitigated by: (i) establishing project management offices at DWRI and DOA, namely, CPMO and CAMO, respectively with adequate financial management (FM) staffing; (ii) preparing a project specific financial manual; (iii) providing training in ADB's disbursement and financial management requirements; (iv) engaging FM consultant to support the FM aspects throughout the project; and (v) arranging for quarterly internal audits to be reviewed by Project Audit Committee.

44. DWRI and DOA have agreed to implement an action plan to mitigate the project financial management risk. The financial management action plan is provided in Table 12. The action plan table summarizes by executing and implementing agency the key risks, actions to mitigate the risks, agency responsibility, and a timeline. Financial management risks and risk mitigation measures should be reviewed and updated at least once a year. With the implementation of mitigation measures indicated in the table below, it is assessed that CPMO at DWRI will have adequate capacity to use statement of expenditure (SOE) procedures for loan disbursements. Additionally, CPMO will also have the capacity to use advanced accounts.

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<sup>21</sup> Five agriculture ministries in different provinces were evaluated, namely Koshi, Gandaki, Madhesh, Bagamati, and Lumbini. Similarly, assessments were conducted for four provincial water and irrigation ministries, which include Koshi, Madhesh, Bagamati, and Lumbini. It is noteworthy that the nomenclature of ministries may differ across provinces; for instance, the agriculture ministry in Madhesh province is referred to as the Ministry of Land Management, Agriculture, and Cooperative (MOLMAC), whereas in Bagamati Province, it is known as the Ministry of Agriculture and Livestock Development. For the simplicity of assessment, provincial agriculture ministries have been represented as MOLMACs. Similarly, provincial irrigation ministries have been represented as Ministry of Energy, Irrigation, and Water Supply (MoEIWS).

**Table 12: Financial Management Risk Mitigation Action Plan (FMRMAP)<sup>22</sup>**

Area	Risk Description	Risk Rating	Mitigating Action	Responsibility	Time Frame
Federal agencies: CPMO at DWRI, CAMO at DOA and federal PIUs (RIMO, RAMO, Field Offices in Butwal and Gorkha)					
Fund Flow	Complex flow of funds with several implementing agencies, which may cause reconciliation issues and delays in disbursement of ADB funds.  Funds for the project may not be received as planned	Substantial	Project expenditures will primarily be prefinanced by the Government. All Withdrawal Applications will be collated and prepared by CPMO for ADB's submission based on supporting documentation provided by DOA/ CAMO and PIUs.  A separate budget code will be provided for the project. Pre budget discussion with the province PMUs including all IAs under the respective provinces will be carried out before the federal budget is prepared.	CPMO  MOF / MOEWRI	Throughout the project implementation period  By loan effectiveness date and annually thereafter Prebudget discussion with PIUs (March each year)
Staffing	The account staffs may have limited knowledge and experience with ADB procedures & Systems	Substantial	CPMO and CAMO will each appoint 1 FM officer and 1 accountant for the project at their respective offices. Additionally, CPMO and CAMO will also provide 1 accountant each at federal PIUs (RIMO, RAMO and each of the field office in Gorkha and Butwal)  1 PMISC Senior FM expert supported by 2 Junior FM experts will be hired by CPMO. The junior FM experts will be dedicated one each to CPMO and CAMO.  All staffs will be trained in ADB' financial management and disbursement procedures.	CPMO and CAMO  CPMO and CAMO  ADB	By the loan effectiveness date  Within 2 months of loan effectiveness  At the inception of the project, annually thereafter (annual training to PIUs to be given by PIMSC FM

<sup>22</sup> For FMRMAP purposes, Federal PIUs encompass all project offices at the federal level (including RIMO, field offices in Gorkha and Butwal, and RAMO), excluding the project management offices CPMO and CAMO. Meanwhile, "Provincial PIUs" refer to 37 Agricultural Knowledge Centers (AKCs) under provincial agriculture ministries and 35 Water Resources and Irrigation Development Directorates (WRIDDs) under provincial water-irrigation ministries. Lastly, the term "PIUs" collectively encompasses all provincial and federal implementing entities (RIMO, WDWRI, WRIDDs, and AKCs), except for the project management offices CPMO and CAMO.

Area	Risk Description	Risk Rating	Mitigating Action	Responsibility	Time Frame
					expert)
Accounting Policies and Procedures	Existing government policies, procedures and systems will be followed, which may not fully meet ADB's reporting requirements.	Moderate	A Project Financial Manual for the project, delineating Financial Management arrangements, accountability structures, reporting procedures, document retention policies, chart of accounts mapping, internal controls, and audit requisites will be developed. This will be endorsed by all PIUs as project specific financial management arrangement.	CPMO	Within 3 months after the loan effectiveness date
Reporting and Monitoring	The decentralized financial reporting arrangements may lead to incomplete, fragmented, and inconsistent financial reporting.	Substantial	The CPMO shall prepare comprehensive financial information with consolidated information from CAMO and PIUs in an agreed format to be included in the quarterly progress reports and submit it to ADB within 45 days after the end of the reporting period.	CPMO	Within 45 days after the end of the quarter
	Project financial statements may not be timely prepared and reported.		CAMO will collate such information from PIUs for the agriculture components, AKCs for CPMO submission within 30 days after the end of each quarter.	CAMO	Within 30 days after the end of the quarter
	Project Assets / equipment may be lost or not accounted for		Consolidated project financial statements will be prepared by (i) CPMO for irrigation component of the project (including expenses from WRIDDs, RIMO and field offices in Gorkha and Butwal) (ii) CAMO for the agriculture component of the project (including expenses from AKCs and RAMO)	CPMO	By 30 November annually
			CPMO, CAMO and all PIUs will record the project assets in the Public Asset Management system.	CPMO, CAMO, PIUs	Immediately upon purchase

Area	Risk Description	Risk Rating	Mitigating Action	Responsibility	Time Frame
Internal Audit	Internal audits might occur irregularly due to inadequate staffing and limited staff capacity, potentially resulting in unimplemented recommendations from auditor	Substantial	Each of the agencies will carry out internal audit of the project expenditure on a quarterly basis as required by Financial Procedure and Fiscal Accountability Act  CPMO will create a separate project financial management compliance team (including representatives from province ministries to monitor the status of internal and external audit observations. The committee will meet at least bi -annually to ensure that audit observations are timely addressed. Please refer to Annex -x for the TOR of the Team.	DTCO for CPMO, CAMO and federal PIUs  PTCO for provincial PIUs  CPMO	Quarterly  Project Audit committee creation (within 3 months of loan effectiveness)  committee meeting- every 6 months
External Audit	Audit to be conducted by the OAG in accordance with National Audit standards. The decentralized flow of funds and implementation arrangements may lead to incomplete audits and delays in APFS submission to ADB.	Substantial	Consolidated audited project financial statements including all sources of funds will be submitted to ADB by (iii) CPMO for irrigation component of the project (including expenses from WRIDDs, RIMO and field offices in Gorkha and Butwal), (iv) CAMO for the agriculture component of the project (including expenses from AKCs and RAMO)  CPMO and CAMO will coordinate with the OAG to incorporate the project in the OAG's yearly calendar and allow for an early start to the audit, ensuring submission within 9 months until FY2027 and thereafter within 6 months. The audit will be done as per TOR signed between OAG and ADB.	CPMO, CAMO      CPMO and CAMO	15th April each year, until FY 2027 and thereafter, by 15th January each year
Information System	Manual preparation of financial reports for ADB reporting may lead to errors and inaccuracies in the submitted reports	Moderate	CPMO will use the ADB systems LFIS and Client Portal for disbursement (CPD) to conduct quarterly reconciliations of compiled project accounts and ADB disbursement	CPMO	Throughout the project period

Area	Risk Description	Risk Rating	Mitigating Action	Responsibility	Time Frame
			records and keep track of direct payments as well as advances, replenishments to the advance account and liquidations.  All agencies will use country's PFM system: LMBIS, CGAS and TSA for the purpose of project financial management.	CPMO, CAMO and PIUS	Throughout the project
<b>Provincial PIUs – AKCs and WRIDDs</b>					
Funds flow	The funds for the project may be not received as planned	Substantial	Provincial PIUs (AKCs and WRIDDs) will create a separate budget head in PLMBIS in line with federal budget code provided in PLMBIS	Provincial PIUs	By loan effectiveness
Staffing	Adequate FM staffs may not be available for the project	Substantial	Each of the Provincial PIUs (AKCs and WRIDDs) will appoint 1 FM officer for the project. The account officers who are not full time dedicated solely for the project, will get support from the FM consultants stationed in their respective federal counterparts.	Provincial PIUS	By loan effectiveness date
Accounting Policies and Procedures	Existing government policies, procedures and systems will be followed, which may not fully meet ADB's reporting requirements.	Moderate	All provincial PIUs will formally accept and endorse the project financial manual as a guiding document for the project financial management.	PIUs	Within 4 months after the loan effectiveness date

ADB = Asian Development Bank, AKC = Agriculture Knowledge Center, CAMO = Central Agriculture Management Office, CGAS = Computerized Government Account System, CPD = Client Portal for Disbursement, CPMO = Central Project Management Office, DOA = Department of Agriculture, DTCO = District Treasury Controller Office, DWRI = Department of Water Resources and Irrigation, FM = financial management, FY = fiscal year, LFIS = loan financial information system, LMBIS = Line Ministry Budget Information System, OAG = Office of Auditor General, PIMS = project implementation and management support consultant, PIU = project implementation unit, PTCO = Provincial Treasury Controller Office RAMO = Rajapur Agriculture Management Office, RIMO = Rajapur Irrigation Management Office, TSA = Treasury Single Account, WRIDD = Water Resources Irrigation Development Division.

## B. Disbursement

### 1. Disbursement Arrangements for ADB and SFD Funds

45. Disbursement of the loan proceeds, including SFD funds, will follow the ADB's Loan Disbursement Handbook (2022, as amended from time to time),<sup>23</sup> and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.<sup>24</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

46. The DWRI/MOEWRI, through its CPMO and with inputs from CAMO at DOA, will be responsible for: (i) preparing annual contract awards and disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing and sending withdrawal applications to the ADB.

47. The project expenditures will primarily be pre-financed by the government, and subsequently claimed to ADB through CPMO, following a reimbursement procedure. The direct payment procedure will be used where the advance fund procedure cannot be applied - in line with the LDH (2022, as amended from time to time).

48. **Advance fund procedure.** Immediately after loan effectiveness, CPMO at DWRI/MOEWRI should establish and maintain separate advance accounts for each funding source for the ADB loan and SFD loan respectively, at the Nepal Rastra Bank. The currency of the advance accounts is in US dollars. The advance accounts are to be used exclusively for the ADB's and SFD's share of eligible expenditures. The CPMO at DWRI administers the advance account and is accountable and responsible for the proper use of advances to the advance accounts.

49. The total outstanding advance to the respective advance accounts should not exceed the estimate of ADB's or SFD's share of expenditures to be paid through the advance accounts for the forthcoming 6 months. The CPMO may request for initial and additional advances to the advance accounts based on an estimate of expenditure sheet setting out the estimated expenditures to be financed through the advance accounts for the forthcoming 6 months.<sup>25</sup> Supporting documents should be submitted to ADB or retained by the CPMO following ADB's Loan Disbursement Handbook (2022, as amended from time to time) when liquidating or replenishing the advance accounts.

50. **Statement of expenditure procedure.**<sup>26</sup> The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures and liquidation of the advance accounts. The ceiling of the SOE procedure is the equivalent of \$50,000 per individual payment. Supporting documents and records for the expenditures claimed under the SOE should be centralized and maintained by CPMO and made readily available for review by ADB, upon its request for submission of supporting documents on a sampling basis, and for independent audit.

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<sup>23</sup> The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>)

<sup>24</sup> Please register for the Disbursement e-learning at <https://forms.office.com/r/Skb4HidZ0L>

<sup>25</sup> Estimate of Expenditure sheet is available in Appendix 8A of ADB's Loan Disbursement Handbook (2022, as amended from time to time).

<sup>26</sup> SOE forms are available in Appendix 6A and 6B of ADB's *Loan Disbursement Handbook* (2022, as amended from time to time).

Reimbursement and liquidation of individual payments above the SOE ceiling should be supported by required documentation when submitting the withdrawal application to ADB.

51. For co-financier's funds administered by ADB, the procedure will be the same as that for ADB funds. The borrower should also submit separately one original of the withdrawal application and copies of supporting documents to the co-financier, in addition to following the same procedure applicable to ADB funds. ADB will review each withdrawal application and advise the co-financier to make the necessary payment, if any, subject to final approval by the co-financier.

52. The CPMO will collect all payments' documentation (or certified copies) from CAMO at DOA and from each PIUs to support expenditures claimed from ADB under the SOE procedure, to facilitate ADB's SOE reviews. The original supporting documents will be duly archived in a secure place by the respective relevant entities and backed up digitally on a weekly basis.

53. Before submitting the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the ADB's Loan Disbursement Handbook (2022, as amended from time to time). Individual payments below such amount should be paid (i) by project implementing agencies and subsequently claimed from ADB through reimbursement, or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements system is mandatory for submission of withdrawal applications to ADB.<sup>27</sup>

## **2. Disbursement Arrangements for Counterpart Fund**

54. All disbursements under government financing will be carried out in accordance with the regulations of the Government of Nepal and accounting principles acceptable to ADB. CPMO at DWRI/MOEWRI and CAMO at DOA shall arrange a separate budget line for the project in Line Ministry Budget Information System (LMBIS), each of the provincial PIUs (AKCs and WRIDDs) shall open a separate budget code for the project in PLMBIS in line with the budget code provided in LMBIS. DWRI through its CPMO, and DOA through its CAMO will consolidate the project budget on an annual basis and enter the consolidated budget for the project in the LMBIS, with the necessary breakdown.

55. Except for limited transactions in foreign currency, which will be done by CPMO through advance accounts or through ADB direct payments, it is expected that the expenditures incurred by CAMO and each PIUs (AKCs and WRIDDs) for the project will be prefinanced by the Government of Nepal. CPMO and CAMO will execute their transactions through the District Treasury Controllers Office (DTCO), while PIUs (AKCs and WRIDDs) will execute their payments through Provincial Treasury Controller Office (PTCO) using the Treasury Single Account (TSA) system against the appropriate budget line/subline. Subsequently, CAMO, each of the PIUs (AKCs and WRIDD) will submit full financial documentation (or authorized copies of such documentation to CPMO) to allow CPMO to prepare and submit withdrawal applications to ADB.

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<sup>27</sup> The Client Portal for Disbursement facilitates online submission of withdrawal application to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online.

### C. Accounting

56. The CPMO, CAMO, and each PIUs will maintain, or cause to be maintained, separate books and records covering all cash receipts from all funding sources and payments by expenditure category incurred under the project in accordance with Nepal Public Sector Accounting Standards (NPSAS) cash basis of accounting and Government of Nepal's accounting policies, which are consistent with international accounting principles. The government chart of accounts will be used by the implementing agencies but for financial reporting purposes to ADB, the expenditure categories will be aligned with the expenditure categories outlined in the PAM.

57. The CPMO, CAMO, and each PIUs will maintain the following controls registers for the project (i) register of signed contracts and disbursements made against each contract, and (ii) register of claims under the ADB loan submitted to the CPMO (applicable to CAMO and PIUs) and a register of withdrawal applications submitted to ADB (applicable to CPMO). CPMO will consolidate these registers on a quarterly basis. Moreover, CPMO will conduct at least quarterly reconciliation of the consolidated project books of accounts and ADB disbursement records available in the Loan/grant Financial Information Services system.

58. The CAMO and PIUs will prepare quarterly financial reports and annual project financial statements in the format indicated below (as applicable) and submit these to CPMO for consolidation within 30 days after the end of each quarter and 60 days after the end of the fiscal year:

- (i) Statement of cash receipts (by financing source: ADB loan, SFD loan, and government) and payments (by expenditure category) for the current reporting period, past reporting period, and cumulative to date.
- (ii) Statement of claims submitted to CPMO, for the current reporting period, past reporting period, and cumulative to date.
- (iii) Statement of Budgeted vs. actual expenditures. Any significant variances must be duly explained.
- (iv) Notes disclosing the used accounting standards and policies as well as the following breakdown: (a) List of signed contracts; (b) list of approved and disbursed subsidies and grants; and (c) list of claims submitted to CPMO.

59. The CPMO and CAMO will prepare the project financial statements for their respective components based on the detailed information extracted from the country public financial management systems,<sup>28</sup> the annual project financial statements submitted, disbursement claims and supporting documentation submitted by PIUs. A customized project specific financial manual will be prepared to facilitate the consolidation of the financial statements, which will be formalized with a memorandum of understanding between CPMO, CAMO, and the PIUs. This manual will be reviewed and approved by ADB within loan effectiveness. The project financial statement will follow the guidance included in the audit Terms of Reference (TOR), agreed between ADB and the Office of the Auditor General (OAG) and the established reporting templates. Accordingly, the expected disclosures in the consolidated project financial statements shall include at least the following:

- (i) Statement of cash receipts (by financing source: ADB loan, SFD loan, and government) and payments (by expenditure category) for the current reporting

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<sup>28</sup> Expenditures by budget head, sub head and financier, etc. extracted from CGAS and LMBIS.

- period, past reporting period, and cumulative to date.
- (ii) Statement of advance accounts.
- (iii) Statement of disbursement, disclosing all funds claimed from ADB loan and SFD loan, by disbursement method, total expenditure claimed for the current reporting period, past reporting period, and cumulative to date.
- (iv) Disbursement claimed under SOE procedure for the reporting period.
- (v) Statement of Budgeted vs. actual expenditures. Any significant variances must be duly explained.
- (vi) Notes to the Financial Statements disclosing the used accounting standards and policies and other relevant information and explanations.

60. Detailed notes to the financial statements including accounting policies and explanatory notes. The notes of the financial statements should include the following additional disclosures: (a) breakdown of expenditures incurred by expenditure category and by each implementing entity (CPMO, CAMO, and PIUs); (b) Statement of disbursement, disclosing all funds claimed and disbursed under the ADB loan, by disbursement method, total expenditure claimed for the current reporting period, past reporting period, and cumulative to date; (c) Statement of Disbursements claimed under Statement of expenditure procedure for the reporting period; (d) Statement of Reconciliation between ADB Loan and Grant Financial Information Services and Financial Comptroller General Office and Public Debt Management Office.

61. Moreover, to provide timely information to ADB on the project's financial progress and the status of financial management, CPMO, based on inputs from CAMO and PIUs, will include consolidated financial information, in a format agreed with ADB, in the Quarterly Progress Reports (QPRs) to be submitted to ADB within 45 days after the end of the quarter. The information provided shall include, inter alia, detailed information on the following: (i) status of each of the actions agreed as part of the financial management action plan, (ii) status of past audit observations, (iii) reconciliation with project books of accounts and ADB disbursement records, as well as (iv) agreed financial management related actions from ADB review missions. A comprehensive template for the consolidated financial information to be included in the QPRs is included in the PAM Appendix 7.

#### **D. Auditing and Public Disclosure**

62. The CPMO and CAMO, will cause the project's financial statements to be audited (separately on an annual basis) following the International Organization of Supreme Audit Institutions Fundamental Auditing Principles by the Office of the Auditor General (OAG). The audit TOR agreed between ADB, and the OAG<sup>29</sup> will be used as a guide. The scope of audit will cover the entire project, covering all sources and application of funds (including the ADB loan, SFD loan, and the federal government and provincial government contribution), as well as books and records and the applicable internal controls maintained by each implementing agency and as well as other areas that the auditor deems necessary.

63. The audit report of the project financial statement will include a separate audit opinion, which will cover: (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance financial reporting framework acceptable to ADB; and (ii) whether the loan proceeds were used only for the purposes of the project. As part

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<sup>29</sup> ADB and Government of Nepal. [Memorandum of Understanding: Terms of Reference for Audit of ADB Assisted Project in Nepal.](#)

of the audit report a management letter shall also be provided with a breakdown of the audit observations for each implementing agency (CPMO, CAMO, and PIUs). From the second audit onwards, the management letters will include a follow-up on the implementation status of previous audit recommendations (where applicable). The Audited Project Financial Statement (APFS), together with the auditor's opinion, and the management letter will be presented in the English language and submitted to ADB within 9 months from the end of the fiscal year for the first two years, and 6 months after the end of the fiscal year thereafter.

64. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal project supervision, and followed-up regularly with all concerned, including the external auditor.

65. The CPMO, CAMO, and PIUs have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.<sup>30</sup> ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

66. Public disclosure of the APFS, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to information Policy 2018.<sup>31</sup> After the review, ADB will disclose the APFS and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.

## **E. Winding up and Closure of ADB and SFD Loan Accounts**

67. To close the loan account in a timely manner and to comply with ADB's requirements, CPMO, CAMO, and PIUs, will ensure that the following measures are undertaken (as applicable):

- (i) All ADB and SFD financed expenditures are incurred before or by the loan closing date.
- (ii) All withdrawal applications including liquidations of the advance account are submitted to ADB and SFD preferably by the loan closing date but in no case later than the end of the winding-up period; that is, within four months after the end of

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<sup>30</sup> Following is ADB's policy on delayed submission of audited project financial statements:

(i) When audited project financial statements are *not received by the due date*, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.

(ii) When audited project financial statements *have not been received within 6 months after the due date*, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next 6 months.

(iii) When audited project financial statements *have not been received within 12 months after the due date*, ADB may suspend the loan.

<sup>31</sup> Available at <https://www.adb.org/documents/access-information-policy>.

- the loan closing date.<sup>32</sup>
- (iii) Any unutilized advances are refunded to ADB and SFD within two months after the end of the winding-up period.
  - (iv) The final consolidated project financial statements are audited by independent auditors (OAG) as agreed with ADB and the APFS and the management letter is submitted to ADB as soon as possible after the loan closing date.
  - (v) The final consolidated APFS must include all eligible expenditures incurred up to the loan closing date as well as up to the final withdrawal application submitted to ADB.
  - (vi) All past audit observations are resolved in a timely manner; and
  - (vii) All project financial records are filed in an orderly manner and stored in a secure location for at least 1 year following receipt by ADB of the final audited project financial statements or 2 years after the loan closing date, whichever is later.

## **VI. PROCUREMENT**

### **A. Applicable Procurement Policy**

68. Procurement of goods, works, consulting services, and nonconsulting services will follow the ADB Procurement Policy (2017, as amended from time to time) and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time). As ADB will administer co-financing resources, universal procurement will apply to the project.<sup>33</sup>

### **B. Procurement Strategy Summary**

69. The executing agency has prepared a strategic procurement planning report for the project, which defines a procurement strategy that will support the delivery of the project outputs and the achievement of the planned project outcomes. Procurement activities include (i) civil works contracts, (ii) goods contracts, (iii) non consulting package, (iv) consulting services package. Multiple community contracts are proposed for small value, labor intensive works that can be managed by communities.

70. The proposed procurement arrangements including the procurement plan are designed to be “fit for purpose” and will ensure value for money. To achieve value for money, procurement packages have been prepared considering geographical locations, the governance structure and the capacity of the IAs. The Government of Nepal’s National e-procurement system (e-GP) will be used to ensure efficiency, fairness, and transparency. The CPP contracts are expected to bring positive social impacts and ensure sustainability of the infrastructure built.

### **C. Project Procurement Risk Classification**

71. The project procurement risk is assessed moderate, considering the EA’s prior experience in implementing similar projects financed by ADB but at the same time considering the risk of having many implementing agencies with some of them not having prior experience or capacity. To mitigate these risks, mitigation measures proposed include (i) providing procurement

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<sup>32</sup> For SFD cofinanced fund, the borrower should submit one original of the withdrawal application and copies of supporting documents to ADB-administered co-financiers, in addition to following the same procedure applicable to ADB funds. ADB will then review each withdrawal application and advise the co-financier to make the necessary payment, if any, subject to approval by the co-financier.

<sup>33</sup> ADB. 2015. [Enhancing Operational Efficiency of the Asian Development Bank](#). Manila.

and contract management training to the CPMO and PIUs; and (ii) engaging procurement specialists at the CPMO and IA/PIU levels together with extensive support from the project consultants. ADB and TA consultants will provide handholding support to the EA and IAs for advance procurement.

#### **D. Project Implementation Arrangements**

72. **Procurement Methods:** Civil works (CW) packages to be procured range from \$100,000 to \$10,000,000. All works packages will be procured using Open Competitive Bidding (OCB) with national advertisement, using one stage-two envelope (1S2E) bidding procedure. Bidding documents will be prepared using the ADB Standard Bidding Document for the procurement of works – Small Contracts (SBD Works-Small).

73. **Goods and non-consulting services.** There are goods packages with multiple contracts, and one for supply of excavators for RIP, others for procurement of computers and equipment including agriculture and equipment for demonstration, equipment for upscaling, and for vehicles. These packages will have multiple contracts as the exact type and number of equipment and agriculture demonstration and upscaling equipment will be determined during implementation. The exact number of contracts will be determined as the project progresses and demand collected from the beneficiaries. Open Competitive Bidding (OCB) (national advertisement) and Request for Quotation (RFQ) methods will be used for procurement of goods as agreed in the procurement plan. For readily available off-the-shelf goods of value less than \$100,000, the RFQ method may be followed. Bidding documents for procurement of goods will be prepared using ADB Standard Bidding Document (Procurement of Goods) and Sample RFQ (Goods) Document as applicable. Advisory Services will be procured using the RFQ method for non-consulting services.

74. **Consulting Services.** A consulting firm will be engaged to provide management and technical support. The Project Implementation and Management Support (PIMS) Consultants (CS-01) will require national key and non-key experts (see Appendix 9 for details), whereas individual international and national consultants will be engaged as and when required to provide specialist support to the project team and the PIMS consultants. Recruitment of the consulting services will use ADB's quality- and cost-based selection (QCBS) method with full technical proposal (FTP) and with a quality–cost ratio ranging from 70:30 to 90:10, to be determined before advertising based on the justification of CPMO. Technical complexity of the assignment and the principle of value for money will be considered.<sup>34</sup>

75. **Community participation in procurement.** For the FMIS subprojects which are labor-intensive, works will be implemented by mobilizing WUAs through community procurement following the Government of Nepal's Public Procurement Rules and related provincial government guidelines. The threshold limit for contract award to WUA will be NRs 4 million/subproject based on previous experience and such contracts will include simple earthworks using manual labor, simple concrete structures and protection works. For the community procurement, the beneficiary farmers will provide a portion of the labor without charge which will form the beneficiary contribution.

76. A summary of the procurement of equipment to be procured under the project is shown in Table 13.

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<sup>34</sup> For the advance procurement of the PIMS package and based on the justification provided by the CPMO, and agreed to by ADB, the 80:20 quality-cost ratio was used for the selection.

**Table 13: Summary of Equipment and Machinery to be Procured**

SN	Procurement	Use allocation	Total No.
1	Excavators	RIP	2
2	Computers and other Equipment	CPMO, CAMO, PIUs	To be determined
3	Agriculture machinery and equipment for demonstration	AKC	To be determined
4	Agriculture equipment and machinery for upscaling	AKC	To be determined

AKC = Agriculture Knowledge Center, CAMO = Central Agriculture Management Office, CPMO = Central Project Management Office, PIU = project implementation unit, RIP = Rajapur Irrigation Project.

77. **Advance contracting** will be undertaken in conformity with ADB Procurement policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, the Executing Agencies (MOEWRI and MOALD), and the PIUs have been advised that approval of advance contracting and retroactive finance does not commit ADB to finance the project. Advance contracting will include 63 works packages and 1 consulting service package.

78. **Retroactive financing.** No retroactive financing will be used.

79. **Post-review sampling approach.** Except for the first package or the highest value package (in case all packages are published simultaneously) procured by each IA/PIU, all remaining packages will be subject to post review by ADB as agreed in the procurement plan. Post Review (sampling) will be conducted in accordance with ADB's Guidance Notes on Procurement Review. It shall be conducted as part of either project review missions or as distinct post review missions. The EA and IAs will inform ADB of the contracts awarded in a year based on which post sampling reviews will be conducted. ADB will undertake a post review (sampling) of goods procurement and consultant recruitment. Sample size will represent (i) about 30% of the project value and (ii) about 20% of the total number of contracts under post review (sampling). Post review procedures will follow ADB's Guidance Note on Procurement Review. The EA and IAs will retain a record of all procurement documentation, including copies of the signed contracts and the bid evaluation reports, to be available for inspection. For any non-compliances, ADB will take appropriate actions in accordance with clause 1.29 and 1.30 of the Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

80. **Contract management.** A Contract Management Plan (CMP) will be prepared for each contract or a group of contracts as appropriate. A CMP template will be attached to the bidding document and the CMP finalized during contract signing.

81. **eProcurement system.** Procurement of goods and works using OCB method will be done through the government e-procurement portal, i.e., Nepal Electronic Government Procurement System (Ne-GPS).

## **E. Procurement Plan**

82. An 18-month procurement plan indicating procurement packages and review procedures for goods, works, consulting services and non-consulting services is included in Appendix 8.

83. The PIMS and individual consultant's terms of reference are included in Appendix 9.

## **F. Procurement and Supervision Responsibilities**

### **1. Central Project Management Office**

84. The Central Project Management Office (CPMO) under DOWRI has adequate capacity and experience of the ADB procurement guidelines and capacity and experience from ADB supported Community-Managed Irrigated Agriculture Sector Project (CMIASP). CPMO will be responsible for all central level procurement. Central level procurement activities will include (i) Consulting Services, and (ii) procurement of vehicles, excavator, and equipment.

85. In addition, the CPMO will provide necessary support, supervise and guide WRIDDs and AKCs in ADB required procurement processes.

### **2. Rajapur Irrigation Management Office**

86. The RIMO under DWRI will be responsible for procurement of all civil works under RIP. RIMO has adequate capacity and experience in procuring contracts for civil works. They have successfully procured civil works contracts through open competitive bidding (OCB). The activities will include procurement of civil works contracts.

### **3. Project Implementation Units of Hill Lift Irrigation Project**

87. The project implementation units of HLIP at Gorkha and Butwal will be responsible for procurement of all civil works under HILP. They have adequate capacity and experience in procuring contracts for civil works. They have successfully procured civil works contracts in the past through open competitive bidding (OCB).

### **4. Water Resource and Irrigation Development Divisions of the Provinces**

88. The WRIDDs will be responsible for procurement of works for the 100 FMIS in the hills and terai through OCBs and community procurement contracts. The WRIDDs have adequate capacity and experience in procuring contracts for civil works and community procurement. They have successfully procured civil works contracts through OCB, community procurement (CP) up to NRs 6 million and goods under the previous ADB supported CMIASP. It is proposed that each subproject has its own civil works tender and contract as it; (i) allows the subprojects to be managed by the WRIDDs; (ii) strengthens the WRIDDs (iii) larger contractors are not interested in doing the work and will likely subcontract.

### **5. Agriculture Knowledge Centers/Rajapur Agriculture Management Office**

89. The AKCs and RAMO will be responsible for procurement of agriculture machinery and supplies for WUA facility (not works such as agriculture product buying and selling shed, WUA office, cold chamber, which will be under the civil works contract for implementation by WRIDDs).

## **G. Consultancy Services**

90. The core consultancy is for the Project Implementation and Management Supervision (PIMS) Consultant. The terms of reference for PIMS are detailed in Appendix 9. Also, individual national and international consultants will be recruited to directly support CPMO, CAMO, IAs and PIUs and guide PIMS consultants. The terms of reference for individual consultants are detailed

in Appendix 9.

## VII. SAFEGUARDS

91. In compliance with ADB's Safeguard Policy Statement 2009 (SPS),<sup>35</sup> the project's safeguard categories are B for environment, B for involuntary resettlement, and B for Indigenous Peoples.

92. As agreed by ADB and the borrower, the environmental management plan, resettlement plan, and indigenous peoples plan will be updated from time to time during project implementation, upon availability of detailed engineering design, and to reflect adaptive management and unforeseen circumstances or in response to project performance, ensuring that standards originally planned are not lowered.

93. **Prohibited investment activities.** Following ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities on the ADB Prohibited Investment Activities List in Appendix 5 of the Safeguard Policy Statement.

### A. Environment

94. **Environment (category B).** Three initial environmental examinations (IEEs) were prepared for the RIP, HLIP, and FMIS to provide assessments of potential environmental impacts during both construction and operational phases. The IEEs outline the specific environmental concerns related to water pollution, wildlife disruption, and risks to nearby protected areas. During construction, the RIP could have a number of impacts, particularly due to the 1.5 km of embankment works and irrigation infrastructure restoration, including repairing approach channels, strengthening gates and sluices, and the Budhi Khola gated intake. Embankment construction may cause soil erosion and sedimentation, which could temporarily decrease the Karnali River's water quality. The local aquatic animals may be disrupted by the use of heavy machinery and excavation, which can also lead to sedimentation and water pollution. Furthermore, there could be some small disruptions due to construction activities in the buffer zone of Bardiya National Park. HLIP may have a number of effects, including social and environmental impacts. Drilling tubewells and digging trenches for pipelines are examples of activities that can cause land disturbance, soil erosion, and increased sedimentation in neighboring water bodies. Large machinery can produce noise and dust, which may impact the local environment and disturb nearby residents and wildlife. Increased sedimentation and soil erosion might result from FMIS during construction projects, including headworks and canal excavation. Water bodies can get contaminated by sedimentation and runoff, and construction activities may momentarily interfere with agricultural and local community operations. Wildlife disturbances are expected due to the locations of a few FMIS inside important biodiversity areas and buffer zones of national parks.

95. The RIP and two FMIS subprojects are located within buffer zones of different protected areas. Most RIP components (i.e., Budhi Khola intake, 1.5-km embankment, sluice gate rehabilitation, etc.) are located in the buffer zone of Bardiya Natural Park, while the Tarauli scheme in Chitwan National Park and Dhuple Khola in Langtang National Park are both in the buffer zones as well. All the irrigation subprojects involve existing canal systems, and the rehabilitation works are confined to these existing systems. According to the Environment

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<sup>35</sup> ADB. [Safeguard Policy Statement](#).

Protection Rules (EPR) 2020, only the construction of new headworks or changes to the main canal triggers the need for an environmental assessment. Therefore, as per EPR 2020, the project scope for these subprojects does not require a basic environmental study, IEE, or Environmental Impact Assessment under government regulations. For the implementation of the rehabilitation works, the CPMO of the DWRI project must submit detailed project reports (DPRs) to national park authorities, clearly stating that all works are of a rehabilitation nature and will not expand its structures. The CPMO must obtain a letter of no objection from national park authorities before commencing construction activities in the buffer zone.

96. The Mai Valley Forest, Tamur Valley Watershed, and Dharan Forests are three Key Biodiversity Areas (KBAs) that include FMIS schemes. In the Mai Valley Forest, the Run Sung and Mangaltar Dhamsar FMIS schemes will undergo rehabilitation. The Khokse Nangkholyang and Chuwa schemes, inside Tamur Valley and Watershed, will be rehabilitated to boost agricultural productivity. In the Dharan Forests, the Bhuwa and Sira Jimdara FMIS schemes will undergo rehabilitation. Under HLIP, three irrigation schemes—Pyakluk, Tilakpur, and Alketar—are proposed for financing in Rampur Valley, which is an Important Bird Area (IBA) due to the presence of white-rumped vultures. CPMO and its implementing agencies need to implement the biodiversity action plan of the IEEs to protect endangered and vulnerable species, as well as conserve critical habitats that are essential for biodiversity at these subprojects.

97. **Environmental Management Plan.** The environmental management plan (EMP) in the IEE will be attached with the respective bidding and contract agreement documents. The bidders shall propose sufficient budget in their bids for implementing EMP requirements following specifications as suggested in the bill of quantities and standard specification in contract. The contract agreement will have safeguards clauses along with corrective actions and penalty measures for noncompliance. Sufficiency of budget and commitment of bidder in this regard will be verified by the Employer through environment specialist of PIMS before awarding contracts. The successful contractor will prepare and submit a site-specific environment management plan (SEMP) and occupational health and safety (OHS) plan, and quarry management plan which shall be approved by the Employer before contractors' field mobilization. The SEMP and OHS Plan will comply with the EMP requirements and the government policy (including those of provincial government). The PIMS environment specialist will draft a generic SEMP, OHS and quarry management plans, and hand hold the contractor in using them while preparing subproject specific plans.

98. The **Environmental Assessment and Review Framework (EARF)** has been prepared for the FMIS and HLIP subprojects to support and provide guidance to the CPMO and its implementing agencies (IAs): to screen and categorize (i) any changes of subproject designs, (ii) additional subprojects from the current financing, and/or (iii) replacement of subproject(s) with new schemes; prepare environmental assessments, including environmental management plans; and monitor EMP implementation. All of these should be in accordance with the laws of the Government of Nepal and ADB's SPS 2009. It is anticipated that the HLIP and FMIS will have limited impacts for a number of reasons.

- (i) **Use of Existing Infrastructure:** Rather than building new irrigation systems, FMIS concentrates on the maintenance and improvement of already-existing ones. By minimizing habitat and land disturbance, this strategy lessens its negative impacts on the ecosystem.
- (ii) **Use of Modern, Low-Impact Technology:** Both HLIP and FMIS employ environmentally friendly technologies for irrigation and construction, which reduce the overall environmental footprint.

- (iii) Efficient Resource Use: HLIP focuses on optimizing the use of available water resources through irrigation techniques such as drip and sprinkler systems, which reduce water waste and lower the ecological footprint.
- (iv) Localized Impact Areas: Subprojects under FMIS are implemented in specific, localized areas, limiting the geographical spread of potential impacts.
- (v) Community Involvement: Local communities and stakeholders are actively involved in the planning and implementation of the subprojects. This participation ensures that the projects align with local needs and environmental conditions.
- (vi) Sustainable Water Management: Subprojects aims for efficient water use, which helps maintain water availability, reducing the risk of over-extraction.

99. The framework will also serve to provide detailed guidance on the selection of sites for the community conjunctive groundwater program to be developed at selected FMIS in the Terai region and Rajapur. Recognizing the critical need for groundwater in the Terai due to water shortages during the dry season and, in some instances, during the monsoon season, the program will primarily focus on the electrification of tubewells by providing grid electricity and replacing diesel pumps with electric pumps. The scope of the program will include the procurement and installation of electric lines and electric tubewells. From the standpoint of environmental safeguards, criteria to select locations are shown in the EARF to ensure there will be limited impacts. These selection criteria are also reflected in the following paragraph. CPMO should adhere to the selection criteria.

100. DWRI field offices, located in Butwal and Gorkha, serving as PIUs for the HLIP, along with the provincial offices of the WRIDD as PIUs for the FMIS and conjunctive use of groundwater, and Rajapur Irrigation Management Office (RIMO), will ensure that no Category A projects, as delineated by the ADB SPS 2009, will be considered for implementation. Furthermore, these PIUs shall ensure that subprojects adversely impacting environmentally protected areas and culturally significant sites will not receive funding under the project. The HLIP and FMIS subprojects, and conjunctive use of groundwater will strictly avoid engaging in any activities enumerated in the ADB's Prohibited Investment Activities List. The following criteria will be rigorously applied to exclude sites with potential adverse environmental impacts on sensitive areas.

- (i) Subproject components should not be situated in core area of national parks, wildlife reserves, conservation areas, and Ramsar Sites.
- (ii) Subprojects within buffer zones should be avoided or only supported if they are only rehabilitation of existing structures, site specific biodiversity assessment in the IEE demonstrates no significant pre-mitigation impacts, and that ADB's SPS 2009 and government requirements can be met.
- (iii) No subproject components will be proposed within world, national, regional, and protected heritage sites and monument sites.
- (iv) Subprojects will not involve the construction of barriers or weirs across rivers.<sup>36</sup>
- (v) Projects requiring EIA in accordance with the Environmental Protection Act, 2019, and Environmental Protection Rules, 2020.
- (vi) Activities explicitly listed in the ADB's Prohibited Investment Activities List (refer to Appendix 5 of the ADB SPS 2009).
- (vii) Groundwater quality must be within the acceptable standards of the government or international guidelines, whichever is more stringent.

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<sup>36</sup> Excluding check dams constructed for watershed management, which may typically include small structures of 1–3 m high.

101. The EARF will provide guidance on due diligence and environmental assessment to the CAMO and its implementing agencies for the enhancement of agricultural facilities under output 3. This component of the project will support value addition through the enhancement of agricultural facilities, including but not limited to crop collection centers, storage facilities or chambers, and office infrastructure. As per the EARF, only category C subprojects as defined by ADB SPS 2009 will be accepted for financing by the project. Other selection criteria are shown below:

- (i) facilities comply with national laws and regulations, obtaining environmental clearance from government before approval when required.
- (ii) no facilities requiring national EIA or IEE will be eligible for support.
- (iii) activities involving invasive species will not be eligible for support.
- (iv) activities involving herbicides or pesticides of international concern regarding their ecological impacts (e.g. neonicotinoids) will not be eligible.
- (v) activities requiring vegetation clearance or cutting of trees will be limited to modified habitat (e.g., built up or agricultural lands).
- (vi) structures or buildings will be located at a minimum distance of 30m from rivers and 15m from streams and other waterbodies

102. **Environmental Monitoring Reports.** RAMO, WRIDDs and DWRI will support the CPMO in monitoring environmental safeguards compliance through regular site inspections. This involves scheduled and unscheduled visits to subproject sites to ensure that all EMP provisions are being followed. The visits will be taken by the environment safeguard focal and community organizers of the implementing agencies on a weekly basis completing checklists developed by the consultants and making a photographic record. CPMO to visit on a quarterly basis with more detailed review again using checklists and keeping a photographic record.

103. On a quarterly basis, the implementing agencies will prepare and submit reports to CPMO, summarizing monitoring activities, findings, incidents of non-compliance, and relevant environmental safeguards matters. Environmental monitoring reports (EMRs) will be produced by CPMO on a semi-annual basis to track the advancement of EMP implementation. The PMU and implementing agencies will utilize the PIMS and environment monitors for comprehensive oversight of EMP activities throughout all project stages. The Junior Extension Technicians/Social Mobilizers (JET/SMs), community organizers, and site engineers will be provided training on conducting and managing environmental safeguard monitoring. The EMR format provided in the Appendix 10 serves as a foundational template; however, it may be supplemented with additional narrative, tabular data, graphical illustrations, and photographic evidence to thoroughly record project progression, adherence to environmental safeguards, and any rectifying measures undertaken. Semi-annual EMRs will be submitted to ADB within 30 days after the close of the reporting period (e.g. on 30 July for Jan-Jun period and 30 January for Jul-Dec period) and will continue until ADB's issuance of the project completion report (Appendix 11). The EMRs cleared by ADB will be made publicly available on the ADB website.

104. **Public Consultation and Grievance Redress Mechanism.** During project planning, comprehensive public consultations were conducted, including site walkthroughs and focus group discussions with stakeholders such as government officials, community leaders, farmers, and DWRI representatives. These consultations aimed to assess the project's potential impacts and to determine necessary mitigation measures. The CPMO, supported by the PIMS, will continuously involve affected communities and stakeholders. This ensures their perspectives are integrated, necessary training and support are identified, and project execution is seamless.

Annual stakeholder engagements are scheduled, preferably in the last quarter of each year. Measures will be taken by the executing and implementing agencies to adapt to COVID-19 and other widespread diseases. The CPMO will leverage digital platforms and various media to disseminate updates and solicit feedback, ensure health risks and regulatory compliance are addressed. A comprehensive GRM will be made operational to effectively manage and resolve any social or environmental concerns related to the project.

105. **Roles and Responsibilities related to Environmental Safeguards.** The CPMO will be responsible for ensuring that the project fully conforms with the loan agreement, ADB's SPS 2009, the EARF, and all applicable legal and regulatory requirements of the government. Compliance with safeguards will be mandatory for the project to remain on track; the timely identification of any safeguard issues and the implementation of corrective actions will serve as a performance indicator monitored by the ADB. To ensure adherence to the environmental safeguards stipulated in this PAM, the EARF, and IEE, the CPMO will engage the support of an environment specialist under the PIMS and Safeguards Desk. The roles and responsibilities of the project stakeholders are as follows (Table 14).

**Table 14: Roles and Responsibilities Related to Environmental Safeguards**

Agency	Roles
CPMO	<ul style="list-style-type: none"> <li>• Comply with the government EPA 20219, EPR 2020, and other environment-related statutory requirements of the project.</li> <li>• Ensure compliance with ADB SPS 2009, the project EARF, and loan covenants;</li> <li>• Ensure compliance with international good practices per the following the requirements of the International Finance Corporation's General EHS Guidelines, their guidelines on agribusiness/food production/forestry/water and sanitation, and the International Labour Organization's Code of Practice on Safety and Health in Construction;</li> <li>• With the support of PIMS and Safeguards Desk, review and approve environment categorizations and IEE/s and EMP(s), before submitting to ADB for concurrence and review and disclosure respectively;</li> <li>• With the support of PIMS review and approve environmental safeguard related clauses and sections to be included in tender documents and civil works contracts of contractor(s);</li> <li>• with the support of PIMS evaluate and approve the construction environmental management plan (CEMP) that the contractor(s) have prepared;</li> <li>• Ensure that the project and all contractors obtain permits, licenses, etc. for activities before the implementation of the respective construction activity;</li> <li>• be in charge of applying for important documents and sending them to government offices for the processing of permits and clearances, such as environmental clearance certificates, tree-cutting permits, and other pertinent licenses and permits;</li> <li>• ensure environmental clearances obtained for subprojects before issuing bidding documents and awarding any work contracts to any contractors;</li> <li>• with support from Safeguards Desk and PIMS, conduct training and workshops on environmental management and site induction for all staff and workers involved in the project implementation;</li> <li>• carry out regular (at least quarterly) field verification and review environmental compliances by the PIUs and contractor during project implementation, in coordination with the PIMS, PIUs and the contractor's environmental focal person;</li> <li>• carry out regular (at least quarterly) field verification and review environmental compliances by the contractors.</li> <li>• close supervision and monitoring of all components during the implementation with a zero-tolerance approach to health and safety risk management, ensuring adequate health and safety supervision.</li> <li>• make sure that environmental monitoring reports (EMRs) are prepared, and submitted for publication locally and on the ADB website as specified in the loan agreement;</li> <li>• implement effective environmental monitoring during the pre-construction, construction, and operation phases, guided by the IEEs submitted to ADB. This includes, but is not limited to, inspections, reviews of monitoring forms prepared by the PIUs, contractors, and documentation of the issues received through GRM;</li> <li>• with PIMS support, provide and record environmental observations during any site visits that</li> </ul>

Agency	Roles
	<p>may include, but are not limited to, excessive dust, loud noises, improper disposal of waste, chemical or oil spills, camp hygiene, health and safety, and improper borrow area management;</p> <ul style="list-style-type: none"> <li>• in case of potential risks and hazards to health, environmental quality, and properties that may result from poor EMP implementation, immediately guide PIUs to cease the construction or operational activities that pose risk and conduct immediate containment and mitigation activities;</li> <li>• take proactive and timely measures to address any environmental safeguards-related challenges at the national, state, or district levels, such as (a) delays in the processing of clearances during the pre-construction stage and (b) significant grievances during the construction and operation stages;</li> <li>• review and approve corrective action plans (CAPs) for environmental safeguard noncompliance;</li> <li>• inform ADB of any unanticipated environmental impact(s) that occurred during the project implementation phase;</li> <li>• ensure GRM, as envisaged in the IEE and EARF, is in place and fully operational from the onset of project implementation; and</li> <li>• perform other tasks relevant with environmental safeguards of ADB and government of Nepal.</li> </ul>
PIMS (national environmental specialist)	<ul style="list-style-type: none"> <li>• Support CPMO, CAMO, PIUs, and government provinces in ensuring subprojects' compliance with national policies and ADB's requirements for environmental safeguards.</li> <li>• provide technical expertise to CPMO to implement environmental safeguard requirements as per the EARF and ADB SPS 2009.</li> <li>• Assist with updating IEEs and EMPs for subprojects.</li> <li>• Support the project in implementing EMPs, the recommendations of the IEEs, and guidance in the EARF.</li> <li>• assist the project to comply with the procedures and requirements indicated in the EARF.</li> <li>• support the project on monitoring of environmental safeguards at subproject sites</li> <li>• conduct environmental site inductions to contractors and project staff to ensure understanding of EMPs, government's environmental laws and requirements, and ADB SPS requirements</li> <li>• assist the CPMO in preparing the environmental monitoring reports for timely submission to ADB.</li> <li>• support any environmental management and safeguard project matters.</li> </ul>
Implementing Agencies:  RIP, HLIP and FMIS	<ul style="list-style-type: none"> <li>• Implement environmental safeguard requirements as per the EARF and ADB SPS 2009.</li> <li>• Identify and acquire the necessary statutory environmental licenses, permissions, and approvals for subprojects.</li> <li>• Include any standards and conditions that are specified in regulatory clearances and consents in the comprehensive subproject design.</li> <li>• With support from PIMS, PIUs (i.e., RIMO, WRIDDs and DWRIs in Gorkha and Butwal) will conduct environmental screening of subprojects by using the REA checklist(s) and submit to CPMO for review and approval, awaiting ADB concurrence before confirming subproject categorizations;</li> <li>• With support from PIMS, PIUs will update IEEs and EMPs of subprojects or prepare new assessments through, but not limited to, reconnaissance survey, collecting data from the proposed subproject sites, government requirements and public consultations;</li> <li>• Ensure that the project, and all contractors obtain permits, licenses, etc. before the implementation of the respective construction activity;</li> <li>• Carry out regular field verification and review of environmental compliances by contractors, in coordination with the PIMS and the contractors' environmental focal person, and report to CPMO on the results and findings;</li> <li>• Perform regular field verification and review of environmental compliances by contractors;</li> <li>• with support from PIMS, PIUs will conduct training and workshops on environmental management and site induction for all staff and workers involved in the project implementation;</li> <li>• Implement effective environmental monitoring during the pre-construction, construction, and operation phases;</li> <li>• With support from community organizers and PIMS, PIUs will gather information from the implementation of the EMP and EARF to be included in the EMR preparation by the CPMO;</li> <li>• with PIMS' support, PIUs will provide and record environmental impact observations during any site visits;</li> <li>• In case of potential risks and hazards to health, environmental quality, and properties that may result from poor EMP implementation, PIUs will immediately contractors resolve construction activities that pose risk and conduct immediate containment and mitigation activities;</li> <li>• PIUs will take proactive and timely measures to address any environmental safeguards-related</li> </ul>

Agency	Roles
	<p>challenges at the national, state, or district levels, such as (a) delays in the processing of clearances during the pre-construction stage and (b) significant grievances during the construction and operation stages;</p> <ul style="list-style-type: none"> <li>• PIUs will participate and/or lead public consultations and GRM processes;</li> <li>• be part of the process and operations of GRM as envisaged in the IEE and EARF;</li> <li>• Perform other tasks relevant with environmental safeguards of ADB and government of Nepal.</li> </ul>
Contractors	<ul style="list-style-type: none"> <li>• Appoint the contractor's environment, health, and safety focal person and attend training to be organized under the project.</li> <li>• Obtain necessary environmental license(s), permits, etc., from relevant agencies for any ancillary facilities prior to commencement of works.</li> <li>• Implement and document all mitigation measures in the EMP and environmental quality monitoring plan.</li> <li>• Ensure that workers and site supervisors participate in environmental safeguard-related training events.</li> <li>• Ensure compliance with environmental statutory requirements and contractual obligations.</li> <li>• Participate in resolving safeguards issues.</li> <li>• Respond promptly to grievances from the local community or any stakeholder, implement environmental corrective actions or additional environmental mitigation measures as necessary, and inform the relevant employers.</li> <li>• Based on the results of EMP monitoring, cooperate with the employers to implement environmental corrective actions and CAPs, as necessary.</li> <li>• Ensure that appropriate worker facilities (workers' accommodation/camps) are provided at the work sites.</li> <li>• Register and maintain records of all work-related accidents, and undertake remedial actions to mitigate/minimize recurrence.</li> <li>• Implement EMP measures and report to the employer if any new impacts have surfaced; seek guidance from PIU as required in EMP implementation.</li> <li>• Conduct environmental monitoring (air, noise, etc.) as per the monitoring plan</li> <li>• Prepare monthly EMP monitoring reports and submit them to the employer.</li> <li>• Address any grievances effectively and in a timely manner</li> </ul>
ADB	<ul style="list-style-type: none"> <li>• review IEEs including EMPs and disclosing draft and final reports on ADB's website;</li> <li>• review EMRs, and disclose the final reports on ADB's website;</li> <li>• explain policy requirements and safeguard covenants in the loan and project agreements to executing agency, CPMO and PIUs;</li> <li>• monitor implementation of the EARF and EMP through due diligence missions;</li> <li>• advise CPMO on carrying out its responsibilities and in building capacity for safeguard compliance;</li> <li>• monitor overall compliance of the subprojects to this PAM, the EARF and EMPs; and if necessary, provide further guidance on the format, content, and scope of the periodic monitoring reports for submission to ADB.</li> </ul>

Source: Asian Development Bank.

106. Community organizers play a crucial role in the implementation and success of the project by acting as a bridge between the project management and the local communities. They are responsible for engaging with community members to ensure their participation and cooperation in various subproject activities. This includes organizing meetings, disseminating information, and facilitating discussions to gather community input and address concerns. Additionally, community organizers assist in the implementation of the EMP by monitoring compliance at the local level. They work closely with the PIUs to ensure that environmental safeguards are upheld and that any issues are promptly addressed. They also support the preparation and execution of IEE and public consultations, ensuring that community perspectives are included in project planning and decision-making processes. Community organizers are instrumental in capacity building and training initiatives. They help to empower local community members by providing training on various aspects of the project, including environmental management, sustainable practices, and

the use of new technologies. This empowerment is key to ensuring the long-term sustainability of the project, as it builds local capacity to manage and maintain project outcomes.

107. The CPMO will be responsible for managing the civil works and the PIUs will be responsible for managing community contracts in their respective jurisdictions with support from the experts in the PIMS. CPMO and PIUs role encompasses overseeing the EMP implementation process, from initial contract inclusion to continuous monitoring and improvement, ensuring that environmental standards and health and safety measures are upheld throughout works. The civil works and community contractors' active participation in these processes will enhance the effectiveness and sustainability of the projects. The same environmental safeguard requirements as for civil works contractors will also be applicable to the community contractors.

108. To ensure EMP implementation, it is crucial to embed specific clauses within the civil works and community contracts that mandate adherence to the EMP. This includes outlining clear responsibilities for all parties and cost related items such as PPE provision. The full EMP must also be provided in the bidding document and contract agreement. Contractors are required to submit construction EMP making it a fundamental part of the contractual agreement from the onset. The CPMO and PIUs will oversee this process, ensuring that the EMP clauses are effectively incorporated into all contracts. The contractors must always be required to follow the current version of the EMP which is the version disclosed on ADB's website. Inclusion of the EMP in the contract documents and satisfactory EMP implementation is a performance indicator that will be monitored by ADB.

109. The contractors and workers should be trained on EMP requirements and implementation procedures. Conducting training sessions for civil works and community contractors ensures they are well-versed in the necessary protocols. Similarly, engaging and training the civil works and community contractors on EMP monitoring and implementation support can foster a collaborative approach and enhance compliance. The CPMOs and PIUs, with support from community organizers, will be responsible for organizing and facilitating these training sessions, leveraging their expertise and resources to ensure comprehensive education on EMP requirements.

110. Contractors will submit regular reports on EMP compliance. The CPMO and PIUs will play a key role in coordinating these monitoring activities by conducting site inspections. The civil works and community contractors will actively participate in monitoring, providing valuable on-ground insights and feedback on construction activities. Further, maintaining detailed records of all activities related to EMP implementation is essential. This includes training records, monitoring reports, and audit findings. Ensuring that all documentation is easily accessible for review by relevant stakeholders promotes transparency and facilitates continuous monitoring and evaluation. The CPMO and PIUs will oversee the documentation process, ensuring that all records are accurately maintained and accessible, and will regularly review these records to assess compliance and performance.

111. The implementation of health and safety measures is critical in civil works and community subprojects. The CPMOs and PIUs, with the help of community organizers, will ensure that contractors adhere to health protocols and safe work practices. Contractors must maintain records of health and safety incidents reporting any lost time or fatalities to PIUs and upwards to CPMO within 24 hours with an incident report. Training sessions on health and safety will be conducted for both workers and community members. Through the health and safety staff, civil works and community contractors' role includes adhering to health and safety guidelines, organizing safety drills, and reporting any health and safety concerns to the PIUs.

112. **Capacity Building.** The proposed capacity building includes specific training programs for CPMO and implementing agencies. The training will cover a wide range of topics, including ADB's safeguard policies, environmental management, and the proper integration of these practices into project implementation. Additionally, there will be capacity building on monitoring and compliance mechanisms, ensuring CPMO and implementing agencies are well-equipped to maintain the project's sustainability and compliance standards.

113. To strengthen the institutional capacity of the CPMO, PIUs, community organizers, and other project staff, it becomes crucial for the project to assist in strengthening robust environmental capacity. With the help of PIMS and external experts from the project, here are useful trainings, but not limited to, that can help CPMO, PIU, community organizers, and other staff effectively implement environmental safeguards and promote sustainable development practices.

- (i) Environmental Awareness Workshops: Basic awareness workshops about environmental issues, such as pollution, resource depletion, and habitat destruction.
- (ii) Impact Assessment Training: Providing training on basic impact assessment to assess the potential environmental impacts of subprojects. This includes identifying potential risks, evaluating mitigation measures, and understanding regulatory requirements.
- (iii) Environmental Monitoring and Reporting Training: Providing training on environmental monitoring and reporting helps PIUs understand how to track project impacts and ensure compliance with environmental regulations. This includes data collection methods, monitoring protocols, and reporting requirements.
- (iv) Legal and Regulatory Compliance Training: Training programs on legal and regulatory compliance can help CPMOs, PIUs, and contractors understand their responsibilities under Nepal's environmental laws. This includes education on relevant regulations, permits, and enforcement mechanisms.

## **B. Involuntary Resettlement**

114. **Involuntary resettlement (category B).** Due diligence confirmed that the project interventions under Output 1 such as FMIS and RIP will not involve land acquisition or any involuntary resettlement (IR) impacts, as all project activities will be limited to existing canal systems. For HLIP, all land required for the construction of storage tanks and tube well drilling for 11 HLIP is proposed on government land. In one HLIP, the construction of reservoir tanks is proposed on private land. The owner of the land, who is also the beneficiary of the proposed system, has offered to donate the required 50 m<sup>2</sup>. In HLIP, about 136 km of pipeline will be laid underground, predominantly in rural areas. The pipelaying works are envisaged to cause temporary economic impacts due to likely losses of standing crops. The project will conduct real-time assessments of losses of standing crops and survey of potential affected persons to assess the temporary economic impacts. In case the proposed reservoir locations are changed, and technically feasible government land is not available, voluntary land donation will be adopted. Affected persons will be provided with compensation equivalent to the cultivation cost of the standing crop. Under output 3, the improvement of agriculture facilities including crop storage, WUC storage units, modern agriculture processing centers, and polyhouses will be within the existing facilities. A Resettlement Framework (RF), a sample Resettlement Plan (RP) for HLIP in Baireni, and an IR due diligence report (DDR) have been prepared for the project. The subprojects will be selected using the subproject selection criteria, and category A subproject will be excluded. Further due diligence and meaningful consultation will continue. The subprojects under each project component will be screened using the IR impact categorization checklist in Appendix 12. Considering the temporary economic impact during pipelaying work, the project, as per ADB SPS

2009, is classified as category B for IR safeguards.

115. The proposed mitigation measures and safeguard planning documents are adequate to address the envisaged temporary economic impacts. The Safeguard Liaison Officer at CPMO will coordinate and monitor safeguards implementation, supported by six Social Development Specialists (3 positions in FMIS, 1 in each CPMO, HLIP, and RIP) of the PIMS. To facilitate social mobilization, Consultation, and capacity support at the subproject level, the project will allocate resources to engage Community Organizers in each subproject for a period of two years. A grievance redress mechanism will be established for the project. The RF, RP and IR-DDR will be disclosed on the ADB and CPMO websites and the RP will be included in bid and contract documents. Additional RPs will be prepared for the remaining 11 HLIP and will be updated to reflect any changes during detailed design or design verification.

116. **Resettlement Framework.** Under output 1, 11 HLIPs are not yet identified. Under Output 3, key decisions regarding the mode of operation and the locations for the facilities will be made during implementation. The subprojects will be selected using the subproject selection criteria (see Appendix 14), and category A subproject will be excluded. An RF has been prepared in accordance with ADB SPS 2009 and applicable laws and regulations of the government. The RF will serve as a guide for the screening, consultation, land donation, preparation and implementation of RP, including compensation, survey and census of the affected persons, as well as the design of mitigation measures to ensure that the livelihoods of affected persons are improved or maintained at the pre-project level for project components prepared after board approval.

117. **Resettlement Plan.** The HLIP locations are not yet final, but a sample RP was prepared for the HLIP in Baireni, for which a preliminary design has been prepared. This RP will be updated once the final design becomes available. Upon confirmation of the location and number of tubewells and other HLIP components, the PIMS Social Development Specialist will prepare an RP for each HLIP with IR impacts. All RPs will be endorsed by DWRI to ADB for approval before the commencement of civil works. DWRI and CPMO will ensure that compensation is completed prior to civil works and ensure adequate capacity and resources for implementing and monitoring the RP.

118. **Land Donation Independent Third-Party.** An independent third party will be engaged by CPMO in case of voluntary land donation to verify that the donation is indeed voluntary and did not result from coercion, using verbal and written records, and to ensure that the donor meets the eligibility criteria as stated in the resettlement framework. The report of the independent third party will be included in the semi-annual social safeguards monitoring reports and will require approval from the ADB. The Terms of Reference (TOR) of the independent third party is provided in Appendix 9.

### C. Indigenous People

119. **Indigenous Peoples (category B).** In Nepal, 35% of the population belong to Indigenous Peoples (IPs), and around 52% of the project beneficiaries are IPs. The major IP groups present in the project area are Tharu, Gurung, Magar, Kumal, Bote, Tamang, Sherpa, and Rai Limbu; and these groups are already mainstreamed and has common agricultural practices with the general farmers. The project is anticipated to have positive impacts on IPs due to access to irrigation facilities coupled with knowledge and opportunities for advancing agricultural practices. Additionally, the current operational practices adopted by beneficiaries including IPs will benefit from reduced annual labor contribution requirements resulting from system improvement in both

FMIS and RIP, benefits from built-in training and capacity support for agricultural advancement, and benefits from inclusive provisions such as representation in WUA/WUC created or strengthened for the management of irrigation systems. The project intervention is not expected to have any direct or indirect adverse impacts on the dignity, human rights, livelihood systems, territories, or natural and cultural resources that are used, owned, occupied, or claimed by IPs as their ancestral domain or asset.

120. An Indigenous Peoples Plan (IPP) has been prepared to ensure that IPs are consulted, able to participate in project design and receive culturally appropriate social and economic benefits. Considering ADB SPS 2009, the project is classified as category B for IP safeguards. Further due diligence, social impact assessment, and meaningful consultation will continue. The subprojects under each project component will be screened using the IP impact categorization checklist in Appendix 13, and category A subproject due to adverse impact on IPs will be excluded. All landowners and users will have equal opportunities to participate in subproject activities and the consultation process, as well as equal access to entitlements and grievance redress mechanisms.

121. **Indigenous Peoples Plan.** An IPP has been prepared for the project to ensure that IPs are provided with culturally appropriate social and economic benefits, fair compensation, and are safeguarded from adverse impacts due to project interventions. It also ensures their active participation in the project without coercion. All necessary assistance, mitigation measures, and compensation for affected IPs will be completed before commencement of civil works. Meaningful consultations with IPs must continue throughout all project stages. The project will avoid significant festival days or other culturally important activities during civil works. Additionally, the draft and final IPP will be made available to all affected individuals through community consultations and will be disclosed on ADB and CPMO websites.

#### **D. Social Safeguards Roles and Responsibilities**

122. The CPMO will engage one of their staff as a Safeguard Liaison Officer (SLO), who will be responsible for overall safeguards coordination across the project. The SLO will be supported by six Social Development Specialist of the PIMS. The project will also engage 122 Community Organizers to facilitate social mobilization, consultation, and capacity support at the subproject level for a period of two years. The Chief of the PIU or Engineer designated as site in-charge will act as safeguard focal person (SFP) at PIUs. The SFP will be supported by the Senior/Association Organizers of PIU and community organizer deployed at subproject level. The contractor will appoint a safeguard and safety assurance and safety officer in each contract package, as provisioned in the contract. PIMS provincial social development specialist and environment monitors will monitor safeguards compliance and provide technical assistance. AKC will recruit and mobilize junior extension technician/social mobilizers (JET/SMs) who shall play a pivotal role in facilitating the implementation of ADP by fostering effective communication, collaboration and support to the farmers, WUAs, and WUCs. The JET/SMs will be stationed at sub-project sites, working closely with AKCs, WRIDDs, and project consultants to ensure the successful execution of agriculture extension activities and collections of PBME related data, social mobilization of farmers and support them to join various capacity building activities. The JETs will have at least 3 years' experience in agriculture or rural development programs and have completed at least an intermediate science course in agriculture or a CTEVT-certified agriculture extension course or worked at least 3 years in the Junior Extension Technician (Agriculture) post in the Government of Nepal. The Community Organizers selected by WUA will work closely with the WUA, beneficiary farmers, and implement as instructed by the Social Development Specialist, especially in consultation, training, awareness, institutional development, and coordinating

various activities at the subproject level. The following are the responsibilities of various project related agencies in implementing social safeguards (Table 15).

**Table 15: Roles and Responsibilities Related to Social Safeguards**

Agency	Role
CPMO	<ul style="list-style-type: none"> <li>• Design and organize capacity building and training programs for safeguards staff as well as the other project staff at all levels.</li> <li>• Lead the preparation of annual safeguard implementation program and include in CPMOs' annual program and budget.</li> <li>• Organize formal communications required for awareness campaigns, consultations and participation programs and participate in all consultations/meetings.</li> <li>• Ensure adoption and compliance of resettlement framework in all project activities.</li> <li>• Endorse all RP, IPP and CAP, if any, prepared under the project to ADB and obtain timely approvals.</li> <li>• Submit semi-annual social safeguards monitoring reports (SMRs) to ADB and obtain timely approvals.</li> <li>• Monitor the overall implementation of RP and IPP.</li> <li>• Ensure payment to all affected persons is completed before commencement of civil works.</li> <li>• Ensure timely resolution of complaints and maintain an updated record of complaints.</li> <li>• Monitor implementation of GESI Action Plan.</li> <li>• Ensure that RP implementation and monitoring are integrated in the Project's information and technology monitoring system.</li> <li>• Disclose the RF, RP, IPP, IR-DDR and social safeguards monitoring reports.</li> <li>• Ensure that land donation process is verified and certified by an independent third-party.</li> </ul>
Safeguard Desk at PIUs	<ul style="list-style-type: none"> <li>• Lead implementation of IPP/RP/EMP and frameworks and monitor compliance with project safeguard requirements on day-to-day basis, provide timely corrective measures to address the issues, if any.</li> <li>• Support PIMS social development consultant by providing field level information to consolidate safeguard monitoring report.</li> <li>• Organize or support organizing periodic consultation with beneficiaries/affected persons.</li> <li>• Institutionalize GRM at PIU (SMC level), support/facilitate beneficiary farmer in registration grievance, if any.</li> <li>• Collect/ maintain project induced beneficial impacts (training participants by social category, disaggregated information on benefits generated by employment opportunities</li> </ul>
The Community Organizer in each subproject	<ul style="list-style-type: none"> <li>• Assist the Social Development Specialist in organizing public consultations to disseminate project information and GRM, ensuring the participation of women, the poor, Dalit, and IP beneficiary households at the subproject level.</li> <li>• Assist the Social Development Specialist in identifying vulnerable households (marginal farmers, female-headed households, and landless sharecroppers) and conducting separate meetings to ensure their needs are fully incorporated into project-supported activities.</li> <li>• Support the implementation of training, ensuring the representation of women, IPs, Dalit, and marginal farmers, and maintaining records disaggregated by sex, and caste.</li> <li>• Facilitate CAMO/AKC in the implementation of agriculture development programs, ensuring that women, small and marginal farmers are consulted in the process, and data on farmer group composition are collected and maintained, disaggregated by sex, caste.</li> <li>• Support WUAs in their works related to WUA formation/reorganization and mobilization, conduct meetings, WUA contribution, monitoring of construction works, and mobilization of farmers, linking them to AKC and AULL.</li> <li>• Support the Junior Extension Technician/Social mobilizers in conducting safeguard and gender capacity and sensitization training for WUA executives at the community level.</li> <li>• Support the Social Development Specialist in identifying the need for voluntary land donation for irrigation subproject rehabilitation and discussing arrangements with beneficiaries for such land donation.</li> <li>• Collect and maintain disaggregated socioeconomic data in close coordination with WUA and facilitate WUA in attaining equitable representation of Dalit, IPs, and marginal farmers in the WUA executive committee.</li> </ul>
Junior Extension Technicians	<ul style="list-style-type: none"> <li>• Work as agriculture extension technician as well as social mobilizer.</li> <li>• Work under AKC and coordinate with provincial agriculture and institution specialists, social mobilizers, association organizer at WRIDDs, and PIMS to effectively implement agricultural</li> </ul>

Agency	Role
(JETs)/Social Mobilizers	<p>and institutional programs in the field.</p> <ul style="list-style-type: none"> <li>• Develop site-specific ADPs and oversee their implementation, including organizing training sessions and demonstrations.</li> <li>• Support the liaison, coordination, and organization of ADP activities at the field level including conducting briefing meetings with farmers, facilitating field demonstrations, and facilitating delivering of training sessions on various agricultural aspects, such as crops, machinery, equipment, and facilities.</li> <li>• Assist in strengthening WUAs and establishing WUCs and support them in implementing ADP activities.</li> <li>• Assist farmers/farmer groups and WUCs in preparing applications for subsidies and credit support, facilitating their access to financial resources as applicable.</li> <li>• Mobilize farmers and WUA/WUCs to ensure that the participation levels of women, marginal farmers, ethnic minorities, and disadvantaged groups meet the project's requirements, promoting inclusivity and diversity.</li> <li>• Collect and manage data/information related to current and planned agricultural activities, contributing to informed decision-making and project evaluation.</li> <li>• Coordinate with community organizers in networking and facilitating farmers in collection of data.</li> </ul>
The contractors	<ul style="list-style-type: none"> <li>• To maintain close coordination with the project implementation offices and the PIMS Social Development Specialist/Environmental Safeguard Specialist, finalize detailed designs while adhering to the social safeguard principles adopted for the project.</li> <li>• With the assistance of the PIMS Social Development Specialist/Environmental Safeguard Specialist, ensure that all design-related measures (e.g., special considerations for vulnerable populations related to project locations or design, mitigation measures for affected persons, etc.) are integrated into project designs.</li> <li>• Conduct joint walk-throughs with design engineers from project implementation offices and the PIMS Social Development Specialist/Environmental Safeguard Specialist at sites/sections ready for implementation. Assist in identifying the need for detailed measurement surveys and support PIMS in jointly conducting/updating detailed measurement surveys and census surveys to arrive at the final inventory of loss.</li> <li>• Support PIMS Social Development Specialist in updating the draft RP, IR, DDR and IPP for submission to CPMO and to ADB for review and approval.</li> <li>• Ensure strict adherence to agreed impact avoidance and mitigation measures outlined in the RP and IPP during implementation.</li> <li>• Assist with grievance redressal and ensure recording, reporting, and follow-up for resolution of all grievances received.</li> <li>• Submit monthly progress reports including safeguards, health and safety, and sex-disaggregated data as required for monitoring.</li> </ul>

Source: Asian Development Bank.

## E. Grievance Redress Mechanism

### a. Introduction

123. A common GRM will be in place to redress environmental and social safeguards concerns about the project. Grievance is defined as any issues/concerns that resulted to non-performance of obligations of any of the parties involved in project processes, particularly in safeguards implementation. The GRM described below has been developed in consultation with the stakeholders and will be applicable to all subprojects implemented by DWRI and CAMO under the project. The GRM is anchored on the five principles, underpinning the grievance redress processes and the arrangements envisaged to implement these:

- (i) Transparency. The GRM encourages comments and feedback (negative and positive) to improve the Project. The community must be aware of all complaints, grievances and problems reported; must be involved in their redress; and must be kept informed on progress made in resolving grievances. Public awareness

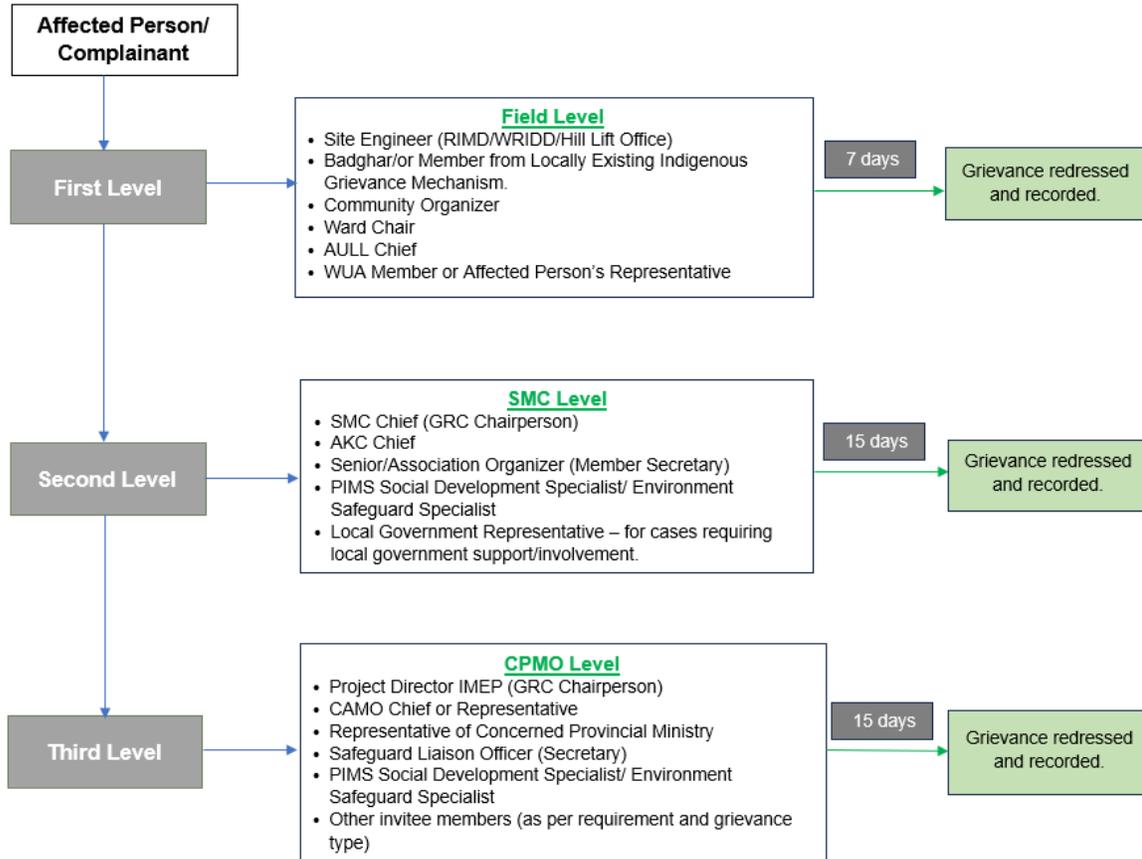
campaign will be conducted to ensure that awareness on the project and its grievance redress procedures is generated. The campaign will ensure that the poor, women, IPs, the vulnerable and the disadvantaged groups are made aware of grievance redress procedures and CPMO (the central office of the DWRI) and the CAMO (the central agriculture management office of DOA) will ensure that their grievances are addressed according to the time schedule, and feedback will be provided to the affected person or the complainant.

- (ii) **Socially Inclusive.** The whole community, and even those outside, are given the opportunity to raise concerns and the right to receive a response. The GRM provides an accessible, inclusive, gender-sensitive, and culturally appropriate platform for receiving and facilitating resolution of affected persons' grievances related to the project.
- (iii) **Simple and Accessible.** Procedures to file complaints and seek redress are kept simple and easy to understand by the affected people, most especially the non-literate, and their communities. Affected persons will have the flexibility of conveying grievances/suggestions through verbal narration from walk-in affected person, by dropping grievance redress/suggestion forms in complaints/suggestion boxes put up at accessible locations, through telephone hotlines, by e-mail, by post, or by writing in a complaint register at project site, SMC (Subproject Management Committee), and CPMO offices.
- (iv) **Anonymity and Security.** To remain accessible, open, and trusted, the GRM ensures that the identities of those complaining are kept confidential. This encourages people to openly participate and file grievances. Careful documentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area and the grievance detail will be maintained by the project. The project will ensure a system for grievance tracking and monitoring, response accorded, its resolution status and closure. SMC together with CPMO's Social Development Specialists will have the joint responsibility for timely grievance redressal on safeguards and gender issues and for registration of grievances, related disclosure, and communication with the aggrieved party.
- (v) **Institutional Capacity Building.** Through the GRM, the SMC and CPMO will strengthen channels of communication and mechanisms for grievance redress at the community/project area level.

#### **b. Mechanism**

124. The GRM is a three-tier arrangement that facilitates time -bound grievance resolution at each level. Responsible persons and agencies/offices are identified to address grievances and seek appropriate advice at each stage, as required. Institutional arrangements, including constitution of grievance redress committees (GRC) at various levels, will be ensured to function throughout the project duration. The CPMO shall ensure the constitution of these committees and oversee the implementation of grievance redress processes, including adherence to time limits, record keeping, and documentation at each level.

**Figure 6: Grievance Redress Mechanism**



- (i) **Field Level:** The first level of the GRM will function at the project location/site. The field-level arrangement will consist of ground implementation staff led by the project's Site Engineer, a Community Organizer, a Badghar or a member from a locally existing indigenous grievance settlement mechanism, and a representative of the affected persons. All minor issues and those perceived as immediate and urgent by the complainant will be resolved at the field level itself (within 7 days). For cases requiring input and involvement of local bodies, the field-level grievance cell will be strengthened by including a Ward Chair (at least one female member and one representative from the local indigenous community). In cases of larger issues that cannot be resolved at the field level, the matter will be escalated to the district/subproject level GRC, the second level arrangement. The Community Organizer will be responsible for documentation and record-keeping. A summary of grievance records will be submitted to the CPMO monthly. The province-based PIMS Social Development Specialist will both monitor and provide guidance and support to the field staff in grievance redress and its record-keeping.
- (ii) **SMC Level:** A GRC will be established at the SMC level, headed by the SMC chief. The Senior/Association Organizer of the Institutional Development section of WRIDD /RIMO will function as the member secretary of the GRC, supported by the PIMS Social Development Specialist/Environmental Safeguard Specialist. The committee will include a representative from the local body, AKC Chief, as per the nature of the grievance. All grievances that cannot be resolved at the field level and

those directly registered at this level will be addressed by this body within 15 days of complaint receipt. Proper documentation of grievances (including records of grievances redressed at the field level) will be maintained by the Institutional Development unit of WRIDD/RIMO and offices responsible for hill lift schemes. In cases where the GRC at this level is unable to resolve a grievance within the stipulated period, the case will be escalated to a higher level for resolution. The SMC level will also maintain follow-up for each grievance, periodically disseminate information to complainants on the status of their grievance and record their feedback (satisfaction/dissatisfaction and suggestions).

- (iii) **CPMO Level:** The arrangement at the highest level will involve the constitution of a project-level committee headed by the CPMO PD as the chairperson. The committee will receive support from the Social Development Specialist/Environmental Safeguard Specialist or technical experts relevant to grievances, CAMO Chief or representative, representative or senior officer from the concerned provincial ministry, and other members as required based on the type of grievance. All grievances that cannot be resolved by the SMC level GRC will be brought to the attention of this body, seeking its advice or referral for resolution at this level. Grievances received or referred to this committee will be resolved within 15 days. Periodic information will be provided to complainants on the resolution status of their grievance. The Safeguard Liaison Officer will act as the secretary for the CPMO level committee and will also be responsible for compiling grievance redress records, including project-level documentation and reporting.
- (iv) The affected person/complainant shall have access to the country's legal system at any stage. Furthermore, accessing the country's legal system can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM.

125. **ADB Accountability Mechanism.** If the established GRM is not able to resolve a grievance, the affected person can also use the ADB Accountability Mechanism through directly contacting (in writing) the Complaint Receiving Officer at ADB headquarters or the ADB Nepal Resident Mission (NRM). Before submitting a complaint to the Accountability Mechanism, affected/aggrieved person/s should make a good faith effort to solve the problem by working with the concerned ADB operations department and/or NRM. Only after doing so, and if they are still dissatisfied, will the Accountability Mechanism consider the complaint eligible for review.<sup>37</sup> The complaint can be submitted in any of the official languages of ADB's developing member countries. The ADB Accountability Mechanism information will be included in the project-relevant information to be distributed to the affected communities, as part of the project GRM.

126. **Consultation arrangements and information dissemination.** The GRM will adopt a consultative and participatory approach to grievance resolution, which may, in some cases, require one-to-one consultation with individual complainants or the aggrieved community. Furthermore, the CPMO and the PIMS Social Development Specialist/Environmental Safeguard Specialist will be responsible for disseminating information to affected persons on the grievance redressal procedure, ensuring that the host community understands the grievance redress process, and encouraging them to register complaints. Adequate consultations, meetings, and public awareness campaigns will be conducted to achieve this objective. Information on grievances received and responses provided will be documented and reported back to the

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<sup>37</sup> Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

affected persons. All grievances will be treated with utmost confidentiality, and the identity of the complainant will not be disclosed. A sample grievance registration form is in Appendix 15.

127. **Record Keeping.** Records of all grievances received, including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were taken, and outcome will be maintained by the CPMO (with the support of PIMS Social Development Specialist/Environmental Safeguard Specialist). As part of record-keeping and reporting practices, information on grievance tracking will also be maintained. Grievance reporting by SMC and CPMO at their respective levels will include information for the reporting period and the cumulative data on select parameters such as total grievances received, redressed, pending, etc., since the project's inception. Summarized information will be included as part of periodic reporting by the CPMO, with support from PIMS, to ADB.

128. **Periodic review and documentation of lessons learned.** The CPMO will periodically review the functioning of the GRM and record information on the mechanism's effectiveness, particularly in preventing and addressing grievances within the project.

129. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication, and reporting/information dissemination) will be borne by the project.

## VIII. GENDER EQUALITY AND SOCIAL DIMENSIONS

130. **Gender equality and social inclusion.** The project is categorized effective gender mainstreaming (EGM). The project is designed to address gender and social inequality through targeted activities in the GESI Action Plan. Women, the poor, and the disadvantaged groups in the project area are expected to benefit from improved irrigation services with advance knowledge on agriculture practices. Through the GESI Action Plan, the project will ensure inclusion of women, and disadvantaged groups in WUA governance structure, project related consultations including their participation in training and capacity support related to agriculture advancement. The project will develop participatory consultation approaches to understand the needs of women and disadvantaged groups in implementation of agriculture development activities. In all WUA payable packages (procured through community contract) the project will encourage women and disadvantaged groups to engage in project generated employment. Additionally, the contractor will be encouraged to engaged women and disadvantaged group ensuring orientations to contractors and labors on national core labor standards, gender equality in wages, SEAH and human trafficking, occupational health and safety, and other requirements of women laborers including water supply, segregated shelter with recreation and sanitation facilities. These will be implemented through contractual clauses and budgeted under the works contracts. Adequate resource allocation and arrangement for GESI action plan implementation and reporting is ensured by the project. A Social Development Expert will be supporting both at CPMO and provincial level for implementation supervision, monitoring, and reporting under the oversight of a designated GESI focal person at the CPMO. Association Organizer at WRIDDs and community mobilizer at WUA level will be supporting the implementation at district/field level activities. The GESI action plan will ensure that: (i) representation of women and other disadvantage group in WUA governance structure reflecting the demographic profile of command area; (ii) equal participation in capacity development and economic empowerment opportunities for women and disadvantaged groups financed under the project; (iii) activities to build capacities of project implementation staff (CPMO, CAMO, WRIDDs, AKC and WUAs) on GESI and (iv) gender, caste and ethnicity disaggregated internal monitoring system.

131. **Poverty and social Dimension.** Over half of the Nepal's poor population live in rural

areas. During the last two decades, the nation-wide poverty has decreased by more than 20 percent (from 42% to 20.27%); however, the rate of decrease has been very unequal across the geographical locations as the incidence of poverty is higher in rural areas (24.66% percent) than in urban areas (18.34 percent). The Gini index for Nepal in 2023 stands at 0.30. The value for urban area is (0.303) is higher than rural (0.287) indicating larger inequalities in per capita consumption spending in urban areas. The project activities will largely focus on rural areas and thus contribute to reducing the gap between the urban and rural areas. The incidence of poverty is reported to be higher in the case of agricultural wage laborers (38.7%). About 74,591 permanent workers employed in agriculture sector of which 41% are female workers. Nepal Living Standards Survey (NLSS) – 2022/23 reveals that limited land holding is a major trigger for the incidence of poverty in Nepal. To a large measure, the incidence of poverty has been found to be less (13.76%) among households having more than 1 ha of arable land compared to HH having less than 1 ha (21.84%). Couched in other words, the larger the size of land holding is, the lesser the incidence of poverty is found. Around three forth (74.50%) of proposed project beneficiaries are marginal farmers having less than 1 ha of arable land. The improved irrigation facility will benefit the small holders targeted by the project. The statistics avail in NLSS 2023 showed that individuals in male and female-headed households have similar poverty headcounts at 20.27% and 20.28%, respectively. However, the poverty depth and severity are slightly higher among female-headed households at 4.6% and 1.52%, respectively, compared to 4.48% and 1.46% for households with male heads. Contrary to the common perception that people in the mountains are poorer than those in the Tarai, these two regions score at the same level on the HDI (0.56) and lag behind the hills. The superiority of the Tarai region in terms of income and life expectancy is nullified by better performance in the mountains on education. Out of the total beneficiaries the project intervention will benefit 65 percent of beneficiaries living in terai terrain.

132. Approaches and depths of participation of civil society organizations (CSOs) will as follows:

- H – Information generation and sharing
- H – Consultation
- H – Collaboration
- L – Partnership

133. The project will strengthen the capacity of Water User Associations (WUAs) to better operate and maintain irrigation systems and establish water user cooperatives (WUCs) in selected irrigation systems which will have integrated irrigation management and agribusiness functions to access government subsidies and rural finance, support for value chain development, facilitate agro-enterprises, and network with private agro-enterprises. The WUA and/or WUC will be required to contribute 50% of the financing for machinery and 15% for WUA facilities, in compliance with government directives. WUAs and WUCs will be responsible for implementing community contracts and coordination for community contribution in labor and support for project construction works including community procurement through the WUA. WUA and WUC members will be trained in weather-sensitive, mechanized and climate smart agriculture practices and agriculture value chains services. A Subproject Management Committee (SMC), which will include WUA/WUC chairperson, will be established in each subproject to coordinate among the stakeholders in an integrated development approach.

## IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

### A. Monitoring

134. **Project performance monitoring.** The achievement of the project targets will be assessed following the design and monitoring framework. The CPMO has already established a project performance monitoring system (PPMS) under the previous CMSIASP-AF project. The existing system, which worked well under CMIASP-AF, will be reviewed and updated as required for the project. The project staff are required to collect disaggregated data for output and outcome indicators when preparing, implementing and monitoring the subprojects. For this, a Project Benefit Monitoring and Evaluation (PBME) system will be established. The data collected through PBME will be entered into a computerized management information system. CPMO will consolidate the information, analyze it, and report through their trimester and annual progress reports and prepare the project completion report. PIMS will support CPMO in the overall process.

135. **Compliance monitoring.** Compliance with Loan Covenants will be monitored by the EA and ADB's project review missions will regularly review the status with them. At the inception mission, ADB will discuss and confirm the timetable for compliance with the Loan Covenants. During review missions, ADB will review the executing agency's compliance with Loan Covenants and, where there is any noncompliance or delay, agree with the Government on corrective measures with a deadline. At the midterm review mission, the Loan Covenants will be assessed to determine if they are still relevant or need to be changed or waived due to change in circumstances.

136. **Safeguards monitoring.** Semi-annual social safeguards and environmental monitoring reports will be prepared within 30 days after each reporting period. This report will be submitted to ADB for disclosure on the ADB website. Monitoring and reporting should continue until the project completion report is issued by ADB. In the case of unanticipated environmental and social safeguards impacts, DWRI will carry out an environmental and/or social impact assessment. Depending on the level of risk, DWRI will either update the IEE and RP or prepare a CAP as necessary. The social safeguards monitoring report template can be found in Appendix 16.

137. **Gender Action Plan monitoring.** The Senior Social Development Specialist of PIMS will take primary responsibility for monitoring the GESI Action Plan and other social dimensions. S/he will assess the quality and completeness of disaggregated data being gathered to assess project benefits and impacts for each subproject.

### B. Evaluation

138. A project inception mission will be fielded within a month after the PIMS submit their inception report, to assist the CPMO in start-up activities. Thereafter, review missions will be fielded at least twice a year. A midterm review mission will be fielded to comprehensively assess project progress and agree on any necessary changes in scope or implementation arrangements. With the support of its project implementation consultants, the CPMO will prepare and submit to ADB a mid-term report at least 3 weeks before the mission. This will be used as a basis to thoroughly assess implementation progress towards meeting the expected outcome and impact. DWRI will submit a project completion report to ADB within 6 months of physical completion of the project.

### C. Reporting

139. DWRI will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system and should include the project's financial progress, showing periodic and cumulative amounts of budgeted and actual sources and uses of funds (covering the total project cost) following the cost categories in the project administration manual and reconciled with ADB's records (Appendix 17); (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; (iii) semi-annual environmental, and social safeguards monitoring reports; (iv) project completion report within 6 months of physical completion of the project. To ensure that projects will continue to be viable and sustainable, project financial statements and the audited project financial statements (APFS), together with the auditor's report, will be submitted annually.

### D. Stakeholder Communication Strategy

140. The project intends to maximize transparency by communicating authentic project information to the stakeholders through multiple means of communication. The major objectives of communications and participation strategy are two-fold. First, it is to keep all stakeholders informed of the project activities, the potential beneficial and adverse impacts. Second, it is to ensure that stakeholders actively participate in all levels of the project cycles and are well trained and equipped to take over the operational responsibilities once the project supports are fully phased out. In the first year of project implementation, CPMO/CAMO, with support from the PIMS, will prepare a gender-sensitive inclusive community awareness and participation plan (CAPP) for the project. The project will ensure an efficient transparent and flexible system to respond to the queries and concerns of the stakeholders for which the sociologist at CPMO, with support from the PIMS concerned specialist, will implement the CAAP activities. The existing project websites will be utilized for disclosing key project related information, including the scope, cost, and financial and institutional arrangements, safeguards reports, such as IEE and resettlement plans/DDR, and progress on procurement, contract awards, and disbursements. The implementation of CAPP will be guided by ADB's Access to Information Policy 2018. Key strategies include:

- (i) Establish and develop the use of digital services as a key communication channel which can provide cost effective access to information to the dispersed and remote irrigation areas and stakeholders. The program will include targeted weather, marketing, and agricultural advisory services. The system will build on existing social media systems and include videos, SMS, and apps and with emphasis on user experience focusing on a deep understanding of users and how to meet the needs of different demographic groups of farmers including, older, younger, male and female farmers, landowners, tenant farmers, government officers, private sector and small-scale entrepreneurs.
- (ii) Mobilization of the women representatives or educated women/girl from the Dalit, or indigenous community as social mobilizer/community organizer for specific target group/community. Use of poster visualizing message will be adopted for those communities where literacy rate is below the average.
- (iii) In the subproject like Rajapur, utilization of existing indigenous communication structure "*Chiragis*" which is widely used and effective in communicating the message in RIP area. This will be very effective for communicating with the primary stakeholders and beneficiaries which are mostly indigenous Tharu community.

- (iv) The project will define key messages for various stakeholders according to their level and need during particular stages of project implementation.
- (v) Utilization of the service of local FM as it is widely listened to by the rural people as the FM frequency are available in cheaper price as well as can be listen in simple mobile phone. The local FM broadcast their program in local languages which is a more effective way than other means of communication.
- (vi) Organize periodic workshop to aware and orient project official on GESI, issues of indigenous/disadvantaged community and other social concerns which are integral part of the project.

**Table 16: Summary of Project Stakeholders and Means of Communication**

S. No.	Stakeholder Profile	Key message and Communication Tools	Responsibility	Timeline
1	Project implementation agencies (CPMO (WRIDD, AKC, HILP and RIMO/RAMO)	Project implementation modality (a) project communication and participation strategy (b) GESI requirements (c) IP issues and (d) grievance redressal mechanism.	CPMO	Year 1
2	Project Beneficiaries/ WUA (primary stakeholders)	Multiple tools including community awareness campaigns/focus group discussion (FGD) and training programs, digital media, indigenous means of communication – Chiragis - on (a) overall project scope, (b) activities under Output 2 (c) scaleup program under Output 3 and (d) project grievance redressal mechanism.	PIMS, WRIDD AKC	Year 1 onwards
3	Women groups	Group meeting, FGD, training and workshop, digital media, women facilitators on (a) projects' GESI strategy, (b) focused program and activities for women (c) access to project facilities offered by the project	PIMS, AKC	Year 1 onwards
4	Indigenous people and disadvantaged group	Group meeting FGD, training and workshop for DAGs, digital media indigenous means of communication, (a) projects' IP strategy, (b) focused program and activities for IPs and DAG (c) awareness on project activities and access mechanism	PIMS, WRIDD, AKC	Year 1 onwards
5	Potential secondary stakeholders (agriculture service provider, NGO/CBOs, rural financing institutions etc.)	Radio/FM, websites occasional workshops with secondary stakeholder on (a) overall project scope and activities and (b) role of private sector and community-based institution in upscaling the project activities	PIMS, WRIDD, AKC	Year 1 onwards

ADB = Asian Development Bank, AKC = Agriculture Knowledge Center, CBO = community-based organization, CPMO = Central Project Management Office, DAG = disadvantaged group, FGD = focus group discussion, FM = frequency modulation, GESI = gender equity and social inclusion, HILP = hill lift irrigation projects, IP = Indigenous Peoples, NGO = nongovernment organization, PIMS = Project Implementation and Management Support Consultant, PIU = project implementation unit, RAMO = Rajapur Agriculture Management Office, RIMO = Rajapur Irrigation Management Office, RIP = Rajapur Irrigation Project, SM = Social Mobilizer, WRIDD = Water Resources Irrigation Development Division, WUA = water user association.

## X. ANTICORRUPTION POLICY

141. Implementation of the project shall adhere to ADB's Anticorruption Policy (1998) and Integrity Principles and Guidelines (2015), both as amended from time to time. ADB has the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project. All contracts financed by ADB shall include provisions specifying that (i) the contracts are ADB financed; (ii) ADB's Anticorruption Policy and Integrity Principles and Guidelines apply;

(iii) the executing and implementing agencies and all project contractors, suppliers, consultants (including lead firms and sub-consultants), and other service providers shall permit ADB to review and inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB; and (iv) the project contractors, suppliers, consultants (including lead firms and sub-consultants), and other service providers undertake that no fees, gratuities, rebates, gifts, commissions, or other payments other than those shown in the bid have been offered, given, or received in connection with the procurement process or in the contract execution. Individuals and entities on ADB's complete Sanctions List<sup>38</sup> are ineligible to participate in ADB-financed, -administered, and -supported activity and cannot be awarded any contracts under the project.<sup>39</sup> The Office of Anticorruption and Integrity endorsement should be sought and obtained prior to the effectivity of, or approving, any contract variation involving a debarred or temporarily suspended firm or individual in ADB's complete Sanctions List, regardless of the nature or cost of contract variation.

142. Underpinned by ADB's zero tolerance for corruption, the Office of Anticorruption and Integrity aligns with ADB's commitment to strengthen governance across Asia and the Pacific. To report a complaint of integrity violations to ADB's Office of Anticorruption and Integrity, please visit <https://www.adb.org/who-we-are/integrity/report-integrity-violations>.

143. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the project.

## **XI. ACCOUNTABILITY MECHANISM**

144. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.<sup>40</sup>

## **XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL**

145. All revisions and/or updates during implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revisions to contract awards and disbursement S-curves. Any changes, revisions, and updates in the gender action plan should also be recorded in this section.

146. If changes in the PAM require ADB's approval, the proposed changes by the government need to be recorded in the memorandum of understanding or aide-mémoire. Upon such approval, changes will be incorporated in the PAM.

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<sup>38</sup> ADB. [Sanctions List](#); and ADB. [Frequently Asked Questions on ADB Sanctions](#).

<sup>39</sup> ADB. [Procurement Regulations for ADB Borrowers](#); and ADB. [Office of Anticorruption and Integrity](#).

<sup>40</sup> ADB. [Accountability Mechanism](#).

**Table 17: Changes to the Project Administration Manual**

<b>PAM Version</b>	<b>Date</b>	<b>Reasons for Change</b>	<b>Main Contents of Change</b>

PAM = project administration manual.

Source: Asian Development Bank.

## APPENDIX 1: DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with National food security increased (Agriculture Development Strategy, 2015–2035) <sup>a</sup>			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p><b>Outcome</b></p> <p>Productivity and sustainability of farms in project areas increased</p>	<p>By 2031:</p> <p>a. Annual yields in the hills and <i>terai</i><sup>b</sup> project districts increased by at least 18% for paddy, 30% for wheat, and 29% for maize (2024 baselines: Paddy 2.85 t/ha, wheat 2.30 t/ha, and maize 2.30 t/ha) (OP 5.3, OP 5.3.1)</p> <p>b. Annual yields in Rajapur increased by at least 2.0% for paddy, 2.5% for wheat, and 5.0% for maize (2024 baselines: Paddy 4.2/ha, wheat 3.2 t/ha, and maize 3.1 t/ha) (OP 5.3, OP 5.3.1)</p> <p>c. Area for HVCs<sup>c</sup> increased to 1,948 ha in <i>terai</i> FMISs, 725 ha in HLIPs, and 1,391 ha in RIP (2024 baselines: <i>terai</i> FMISs 819 ha, HLIPs 194 ha, RIP 290 ha) (OP 5.3, OP 5.3.1)</p> <p>d. Year-round irrigated land increased to 1,354 ha in the uplands under HLIPs (2024 baseline: 0 ha) (OP 5.3.1)</p> <p>e. Volumetric charging system established and operational for 12 HLIPs (2024 baseline: Not applicable)</p>	<p>a.–b. Crop cut survey by the implementing agency, project M&amp;E reports</p> <p>c.–e. Project M&amp;E reports from district agriculture office and project completion survey</p>	<p>A: Continued strong gross domestic product growth increases domestic demand for staple crops and HVCs</p> <p>A: Timely supply of agricultural inputs</p> <p>R: Frequency of extreme weather conditions significantly more than projected</p> <p>R: Increased farm labor shortage because of higher rate of out-migration from rural areas</p>
<p><b>Outputs</b></p> <p>1. Irrigation infrastructure modernized</p>	<p>By 2030:</p> <p>1a. Infrastructure for 100 FMISs covering a command area of 17,452 ha upgraded (2024 baseline: 0) (OP 1.3.1, OP 3.2.5, OP 5.1.1)<sup>d</sup></p> <p>1b. A gated regulator, 1.5 km of flood protection embankment, and three under-sluice structures constructed in the RIP (2024 baseline: 0) (OP 1.3.1, OP 3.2.1, OP 3.2.5, OP 5.1.1)</p> <p>1c. 12 hill-lift irrigation systems constructed covering 1,354 ha of <i>tar</i> (uplands) (2024 baseline: 0) (OP 1.3.1, OP 3.2.5, OP 5.1.1)</p> <p>1d. Micro-irrigation equipment installed in</p>	<p>1a. Completion handover certificate, project progress reports</p> <p>1b.–1f. Test run and handover certificates to WUAs, project M&amp;E reports</p>	<p>R: Staff assigned to the project by the government are frequently rotated, which may cause disruptions in project implementation</p> <p>A: Reliable grid power is available with concessional tariff for the new hill-lift irrigation systems.</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>2. Capacity of irrigation and agriculture agencies and farmer organizations strengthened</p>	<p>100 ha in hill-lift irrigation systems (2024 baseline: 0) (OP 1.3.1, OP 3.1.3, OP 3.2.5; OP 5.3.1)</p> <p>1e. Modernized conjunctive use of groundwater using electric pumps piloted across 1,200 ha in <i>terai</i> (2024 baseline: 0)<sup>e</sup> (OP 5.3.1)</p> <p>1f. At least 20% of FMISs provided with on-farm irrigation infrastructure<sup>f</sup> based on ICWM (2024 baseline: 0) (OP 1.3.1, OP 3.2.1, OP 5.1.1)</p> <p>By 2030:</p> <p>2a. Procedural Guidelines for ICWM Program for Sustainable Irrigation System 2021 updated, including mainstreaming GESI,<sup>9</sup> and adopted by the executing agency (2024 baseline: 0)</p> <p>2b. At least 40% of technical staff of irrigation and agriculture agencies (including agriculture extension workers; and 80% of female technical staff) reported increased knowledge on FMIS management, MOM, and ICWM (2024 baseline: 0) (OP 2.1.1, OP 3.1.2, OP 3.2, OP 3.2.2, OP 6.1.1)</p> <p>2c. 70% of WUA and WUC members (including 33% women and 10% from disadvantaged groups) reported increased knowledge on MOM and ICWM of irrigation systems (2024 baseline: 0) (OP 3.1.2, OP 3.2.2)</p> <p>2d. At least 20 WUCs made operational, with each WUC having at least 33% female members and at least one woman holding an executive position (chair, secretary, or treasurer) and at least 10% representation of disadvantaged groups in the WUCs (2024 baseline: 0) (OP 1.3.3, OP 2.3.1, OP 3.1.2, OP 3.3,)</p> <p>2e. FMIS design guidelines, and sector strategy and road map incorporating climate resilience and modernized technologies, developed and endorsed by the Department of Water Resources and Irrigation for sector-wide use (2024</p>	<p>2a. Progress reports, updated ICWM guidelines</p> <p>2b.–2c. Annual training plans, training reports, project progress reports</p> <p>2d. Project progress reports</p> <p>2e. Final FMIS strategy and guidelines</p>	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
3. Modern agriculture and value chain facilities introduced	<p>baseline: 0) (OP 5.3.2)<sup>d</sup></p> <p>2f. Guidelines for sustainable O&amp;M of FMISs with self-sufficiency prepared and endorsed by the executing agency for sector-wide use (2024 baseline: Not applicable) (OP 5.3.2)<sup>d</sup></p> <p>By 2030:</p> <p>3a. At least 30% of WUAs obtained modern farming machinery and equipment through subsidized financing (2024 baseline: Not applicable) (OP 5.1, OP 5.3.2)</p> <p>3b. At least 30% of WUAs accessed modern WUA facility through subsidized financing (2024 baseline: Not applicable) (OP 5.1, OP 5.3.2)</p> <p>3c. Digital services with information on weather, marketing, and seasonal crop planning established and accessed by at least 30% of farmers (of which 50% are women) (2024 baseline: Not applicable) (OP 2.5.2, OP 3.1.2, OP 5.2, OP 5.3.2)</p> <p>3d. 75% of WUA and/or WUC members (including 33% women and 10% from disadvantaged groups) reported increased knowledge on weather-sensitive, mechanized, and climate-smart agriculture practices, and agriculture value chain services (2024 baseline: 0) (OP 2.1.1, OP 3.1.2; OP 3.2, OP 5.2)</p>	<p>2f. Final sector MOM guidelines</p> <p>3a.–3d. Project progress reports</p>	<p>A: Farmers allot time to participate in technical support programs on modernization of irrigated agriculture</p> <p>R: Uncertainty in acceptability and comfort of farmers in using enhanced and modernized agriculture system</p>

### Key Activities with Milestones

#### 1. Irrigation infrastructure modernized

- 1.1 Finalize detailed design report, bidding document for 1b 39 FMIS subprojects, and 1b scope of work in RIP (Q2 2025).
- 1.2 Award contracts and implement the 1a cluster of FMIS subprojects and 1a scope of work in RIP (Q4 2024).
- 1.3 Award contracts and implement the 1b cluster of FMISs and 1b work in RIP (Q4 2025).
- 1.4 Finalize detailed design report and bidding documents of the first three HLIP systems (Q2 2025).
- 1.5 Award contracts and implement the first three HLIP systems (Q4 2025).
- 1.6 Finalize detailed design report and bidding documents of the remaining nine HLIP systems (Q3 2025).
- 1.7 Award contracts and implement the remaining HLIP systems (Q1 2026).
- 1.8 Develop modern on-farm irrigation under ICWM through demonstrations in HLIP and FMIS subprojects (Q2 2026).
- 1.9 Develop pilot community conjunctive use of groundwater (Q2 2026).
- 1.10 Update the initial environmental examination and environmental management plan, based on the

### Key Activities with Milestones

guideline of environmental assessment and review framework if there are additional subprojects (Q3 2025).

#### 2. Capacity of irrigation and agriculture agencies and farmer organizations strengthened

- 2.1 Conduct consultations to update national ICWM guideline (Q4 2025).
- 2.2 Develop training modules for agricultural extension agents (Q2 2025).
- 2.3 Support establishment of WUAs and WUCs, and provide them with training on sustainable O&M, preparation of O&M, and ICWM plans (Q2 2025).
- 2.4 Develop training modules and implement training to provincial and local irrigation and agriculture agencies (Q2 2025).
- 2.5 Conduct consultations to update the design manual for FMISs and to prepare FMIS strategy and road map, MOM guidelines for farmers on self-sufficient O&M (Q3 2025).

#### 3. Modern agriculture and value chain facilities introduced

- 3.1 Prepare training modules and implement capacity development programs to WUAs and WUCs on agribusiness, agriculture technologies, and enterprise development (Q2 2025).
- 3.2 Procure equipment and facilities to support agriculture demonstrations (Q1 2026).
- 3.3 Develop the system for the digital advisory platform and populate it (Q1 2026).

### Project Management Activities

Establish central project management office, central agriculture management office, project implementation units, and project appraisal committee (Q4 2024).

Establish project steering committee (Q4 2024).

Complete baseline study (Q2 2025).

Design and roll out project monitoring and evaluation and grievance systems (Q1 2025).

Prepare project completion survey and report (Q1 2030).

Prepare periodic progress reports (quarterly progress reports) (30 days after every quarter).

Prepare periodic and annual audited project financial statements (annually, submit to ADB within 9 months from the end of the fiscal year for the first two years, and 6 months after the end of the fiscal year thereafter).

### Inputs

ADB: \$85.00 million (concessional loan)

Saudi Fund for Development: \$30.00 million (loan)

Government of Nepal: \$16.14 million

Beneficiaries: \$2.50 million

A = assumption; ADB = Asian Development Bank; FMIS = farmer-managed irrigation system; GESI = gender equality and social inclusion; ha = hectare; HLIP = hill-lift irrigation project; ICWM = integrated crop water management; km = kilometer; M&E = monitoring and evaluation; MOM = management, operation, and maintenance; O&M = operation and maintenance; OP = operational priority; Q = quarter; R = risk; RIP = Rajapur Irrigation Project; t/ha = ton per hectare; WUA = water users association; WUC = water users cooperative.

<sup>a</sup> Government of Nepal, Ministry of Agricultural Development. 2015. [Agriculture Development Strategy, 2015–2035](#).

<sup>b</sup> *Terai* refers to southern plains across the length of Nepal up to 300-meter altitude.

<sup>c</sup> High-value crops include off-season crops such as vegetables, spices, medicinal plants, tea, and coffee that provide higher net returns per hectare to the farmer than cereal crops like rice.

<sup>d</sup> Improved infrastructure means rehabilitation or construction of permanent intake and lined canals and other infrastructure to minimize seepage loss and efficient water conveyance to the tail point.

<sup>e</sup> For the introduction of electrification and pumps, MOM includes key five tasks and activities: management of water, infrastructure, organizational and institutional arrangements, resources, and agricultural production and marketing.

<sup>f</sup> On-farm irrigation infrastructure is mainly tertiary distribution systems, field channels, small outlets, and division boxes. For piped irrigation, this would include micro-irrigation.

<sup>g</sup> The ICWM program introduces field structures and activities to increase agricultural productivity through

an integrated approach to managing irrigation water as per the optimum need of crops by the farmers' WUA. The update of existing ICWM guidelines will streamline the gaps identified, including gaps related to GESI. GESI mainstreaming in guidelines will ensure (i) inclusion, meaningful participation of women and disadvantaged groups in all the five key activities of MOM, planning, implementation, monitoring, and reporting; (ii) inclusion of women and disadvantaged groups in key decision-making positions of WUA management, (iii) inclusion of women and disadvantaged groups in MOM capacity-building activities; and (iv) zero tolerance of gender-based violence and other discrimination in MOM processes. During the due diligence process, the GESI expert will further assess what the GESI-responsive features for MOM guidelines are within the scope of the project.

Source: Asian Development Bank.

**APPENDIX 2: DETAILED COST ESTIMATES BY EXPENDITURE CATEGORY**

Item	(NPR billion)				(\$ million)				% of Total Base Cost
	Local Currency	Foreign Exch.	Taxes and Duties	Total Cost	Local Currency	Foreign Exch.	Taxes and Duties	Total Cost	
<b>A. Investment Costs</b>									
1. Civil works	6.71	2.98	1.18	10.88	51.64	22.94	9.09	83.67	78.89
2. Environment and social mitigation	0.01	0.00	0.00	0.01	0.10	0.00	0.00	0.10	0.09
3. Mechanical and equipment	0.12	0.35	0.04	0.52	0.95	2.72	0.31	3.99	3.76
4. Training and capacity building	0.67	0.00	0.01	0.68	5.17	0.00	0.04	5.22	4.92
5. Agriculture Facilities	0.31	0.21	0.06	0.57	2.38	1.59	0.44	4.41	4.16
8. Consultant support	0.39	0.05	0.06	0.50	3.01	0.40	0.44	3.86	3.64
<b>Subtotal (A)</b>	<b>8.22</b>	<b>3.59</b>	<b>1.34</b>	<b>13.16</b>	<b>63.26</b>	<b>27.65</b>	<b>10.33</b>	<b>101.24</b>	<b>95.46</b>
<b>B. Recurrent Costs</b>									
1. Project management:	0.50	0.00	0.00	0.50	3.82	0.00	0.00	3.82	3.60
2. PMU/PIU Staff Salaries	0.13	0.00	0.00	0.13	1.00	0.00	0.00	1.00	0.94
<b>Subtotal (B)</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>4.82</b>	<b>0.00</b>	<b>0.00</b>	<b>4.82</b>	<b>4.54</b>
<b>Total Base Cost</b>	<b>8.85</b>	<b>3.59</b>	<b>1.34</b>	<b>13.79</b>	<b>68.08</b>	<b>27.65</b>	<b>10.33</b>	<b>106.05</b>	<b>100.00</b>
<b>C. Contingencies</b>									
1. Physical	0.69	0.20	0.00	0.89	5.32	1.55	0.00	6.87	
2. Price	1.06	0.79	0.00	1.85	8.13	6.11	0.00	14.24	
<b>Subtotal (C)</b>	<b>1.75</b>	<b>1.00</b>	<b>0.00</b>	<b>2.74</b>	<b>13.45</b>	<b>7.66</b>	<b>0.00</b>	<b>21.11</b>	
<b>D. Financial Charges During Implementation</b>									
1. Interest During Implementation	0.00	0.84	0.00	0.84	0.00	6.49	0.00	6.49	
2. Commitment Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Subtotal (D)</b>	<b>0.00</b>	<b>0.84</b>	<b>0.00</b>	<b>0.84</b>	<b>0.00</b>	<b>6.49</b>	<b>0.00</b>	<b>6.49</b>	
<b>Total Project Cost (A+B+C+D)</b>	<b>10.60</b>	<b>5.43</b>	<b>1.34</b>	<b>17.37</b>	<b>81.52</b>	<b>41.80</b>	<b>10.33</b>	<b>133.64</b>	

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

## APPENDIX 3: DETAILED COST ESTIMATES BY FINANCIER

Item	ADB		SFD		BEN		Tax amount	GoN		Total	
	Amount	% of categ	Amount	% of categ	Amount	% of categ		Cash contr	Total	% of categ	
<b>A. Investment Costs</b>											
1.Civil works											
a) Hill and Terai FMIS	40.57	88.62	0.00	0.00	0.32	0.71	4.89	0.00	4.89	10.67	45.78
b) Rajapur ( Stage 1 contracts)	10.15	88.49	0.00	0.00	0.00	0.00	1.32	0.00	1.32	11.51	11.47
c) Hill Lift	0.00	0.00	9.60	89.38	0.00	0.00	1.14	0.00	1.14	10.62	10.74
d) Rajapur (Stage 2 contracts)	0.00	0.00	13.93	88.89	0.00	0.00	1.74	0.00	1.74	11.11	15.67
2.Environment and social mitigation	0	0	0	0	0	0	0	0.1	0.1	100	0.1
3.Mechanical and equipment	2.04	51.21	0.27	6.85	1.36	34.13	0.31	0	0.31	7.82	3.99
4.Training and capacity building	4.08	78.29	0	0	0	0	0.04	1.09	1.13	21.71	5.22
5.Agriculture Facilities	3.31	75.05	0	0	0.66	15	0.44	0	0.44	9.95	4.41
6.Consultant support	3.41	88.5	0	0	0	0	0.44	0	0.44	11.5	3.86
<b>Subtotal (A)</b>	<b>63.56</b>	<b>62.79</b>	<b>23.80</b>	<b>23.52</b>	<b>2.34</b>	<b>2.32</b>	<b>10.32</b>	<b>1.19</b>	<b>11.51</b>	<b>11.37</b>	<b>101.24</b>
<b>B. Recurrent costs</b>											
1.Project management	1.91	50	0	0	0	0	0	1.91	1.91	50	3.82
2. PMU/PIU Staff salaries	0.5	50	0	0	0	0	0	0.5	0.5	50	1
<b>Subtotal (B)</b>	<b>2.41</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.41</b>	<b>2.41</b>	<b>50</b>	<b>4.82</b>
<b>Total Base Cost (A+B)</b>	<b>65.97</b>	<b>62.21</b>	<b>23.81</b>	<b>22.45</b>	<b>2.35</b>	<b>2.21</b>	<b>10.33</b>	<b>3.6</b>	<b>13.92</b>	<b>13.13</b>	<b>106.05</b>
<b>C. Contingencies</b>	<b>15.16</b>	<b>71.81</b>	<b>3.58</b>	<b>16.94</b>	<b>0.16</b>	<b>0.75</b>	<b>0</b>	<b>2.21</b>	<b>2.21</b>	<b>10.49</b>	<b>21.11</b>
<b>D. Financial Charges During Implementation</b>	<b>3.87</b>	<b>59.65</b>	<b>2.62</b>	<b>40.35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6.49</b>
<b>Total Project Costs (A+B+C)</b>	<b>85.00</b>	<b>63.60</b>	<b>30.00</b>	<b>22.45</b>	<b>2.50</b>	<b>1.87</b>	<b>10.32</b>	<b>5.81</b>	<b>16.13</b>	<b>12.07</b>	<b>133.64</b>
<b>% of Total Project Cost</b>	<b>63.60</b>		<b>22.45</b>		<b>1.87</b>		<b>7.72</b>	<b>4.35</b>	<b>12.07</b>		

ADB = Asian Development Bank, BEN = beneficiaries, GoN = Government of Nepal, SFD = Saudi Fund for Development.

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

**APPENDIX 4: DETAILED COST ESTIMATES BY OUTPUTS AND/OR COMPONENTS**  
(\$ million)

Item	Total Cost	Output 1		Output 2		Output 3		PMU	
		Amount	% of Cost	Amount	% of Cost	Amount	% of Cost	Amount	% of Cost
<b>A. Investment Costs</b>									
1. Civil works	83.67	83.67	100.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Environment and social mitigation	0.10	0.10	100.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Mechanical and equipment	3.99	0.31	7.74	0.43	10.90	3.24	81.37	0.00	0.00
4. Training and capacity building	5.22	0.00	0.00	2.57	49.36	2.64	50.64	0.00	0.00
5. Agriculture Facilities	4.41	0.00	0.00	0.00	0.00	4.41	100.00	0.00	0.00
6. Consultant support	3.86	0.00	0.00	0.00	0.00	0.00	0.00	3.86	100.00
<b>Subtotal (A)</b>	<b>101.24</b>	<b>84.07</b>	<b>83.05</b>	<b>3.01</b>	<b>2.97</b>	<b>10.30</b>	<b>10.17</b>	<b>3.86</b>	<b>3.81</b>
<b>B. Recurrent Costs</b>									
1. Project management:	3.82	0.00	0.00	0.00	0.00	0.00	0.00	3.82	100.00
2. PMU/PIU Staff salaries	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	100.00
<b>Subtotal (B)</b>	<b>4.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.82</b>	<b>100.00</b>
<b>Total Base Cost</b>	<b>106.05</b>	<b>84.07</b>	<b>79.28</b>	<b>3.01</b>	<b>2.84</b>	<b>10.30</b>	<b>9.71</b>	<b>8.67</b>	<b>8.18</b>
<b>C. Contingencies</b>									
1. Physical	6.87	5.42	78.83	0.20	2.90	0.68	9.92	0.57	8.35
2. Price	14.24	11.00	77.24	0.51	3.59	1.13	7.95	1.60	11.22
<b>Subtotal (C)</b>	<b>21.11</b>	<b>16.41</b>	<b>77.76</b>	<b>0.71</b>	<b>3.36</b>	<b>1.81</b>	<b>8.59</b>	<b>2.17</b>	<b>10.29</b>
<b>D. Financial Charges During Implementation</b>									
1. Interest during implementation	6.49	5.13	79.01	0.19	2.93	0.62	9.51	0.55	8.54
2. Commitment charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Subtotal (D)</b>	<b>6.49</b>	<b>5.13</b>	<b>79.01</b>	<b>0.19</b>	<b>2.93</b>	<b>0.62</b>	<b>9.51</b>	<b>0.55</b>	<b>8.54</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>133.64</b>	<b>105.61</b>	<b>79.02</b>	<b>3.91</b>	<b>2.92</b>	<b>12.73</b>	<b>9.52</b>	<b>11.40</b>	<b>8.53</b>

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

**APPENDIX 5: DETAILED COST ESTIMATES BY YEAR**  
(\$ million)

Item		Total Cost	2024	2025	2026	2027	2028	2029	2030	2031
<b>A.</b>	<b>Investment Costs</b>									
1.	Civil works	83.67	7.42	19.02	21.46	15.50	9.79	7.93	2.56	0.00
2.	Environment and social mitigation	0.10	0.00	0.02	0.03	0.02	0.02	0.01	0.00	0.00
3.	Mechanical and equipment	3.99	0.11	0.85	1.19	0.76	0.40	0.34	0.33	0.00
4.	Training and capacity building	5.22	0.18	1.06	1.53	1.12	0.60	0.44	0.30	0.00
5.	Agriculture Facilities	4.41	0.00	0.88	1.32	0.88	0.44	0.44	0.44	0.00
6.	Consultant support	3.86	0.17	1.02	0.93	0.73	0.50	0.33	0.17	0.00
	<b>Subtotal (A)</b>	<b>101.24</b>	<b>7.88</b>	<b>22.86</b>	<b>26.46</b>	<b>19.01</b>	<b>11.75</b>	<b>9.48</b>	<b>3.80</b>	<b>0.00</b>
<b>B.</b>	<b>Recurrent Costs</b>									
1.	Project management:	3.82	0.25	0.82	1.11	0.85	0.45	0.26	0.09	0.00
2.	PMU/PIU Staff salaries	1.00	0.03	0.17	0.17	0.17	0.17	0.17	0.14	0.00
	<b>Subtotal (B)</b>	<b>4.82</b>	<b>0.27</b>	<b>0.98</b>	<b>1.28</b>	<b>1.01</b>	<b>0.62</b>	<b>0.43</b>	<b>0.23</b>	<b>0.00</b>
	<b>Total Base Cost</b>	<b>106.05</b>	<b>8.16</b>	<b>23.84</b>	<b>27.74</b>	<b>20.02</b>	<b>12.36</b>	<b>9.91</b>	<b>4.02</b>	<b>0.00</b>
<b>C.</b>	<b>Contingencies</b>	21.11	1.43	4.46	5.47	4.13	2.65	2.15	0.82	0.00
<b>D.</b>	<b>Financial Charges During Implementation</b>	6.49	0.05	0.26	0.61	0.93	1.16	1.32	1.43	0.73
	<b>Total Project Cost (A+B+C+D)</b>	<b>133.64</b>	<b>9.64</b>	<b>28.56</b>	<b>33.81</b>	<b>25.09</b>	<b>16.17</b>	<b>13.37</b>	<b>6.27</b>	<b>0.73</b>
	<b>% Total Project Cost</b>	<b>100.00</b>	<b>7.21</b>	<b>21.37</b>	<b>25.30</b>	<b>18.77</b>	<b>12.10</b>	<b>10.01</b>	<b>4.69</b>	<b>0.55</b>

Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

## APPENDIX 6: PROJECT DESCRIPTION AND IMPLEMENTATION PLAN

### I. Introduction

1. This appendix sets out the project description and implementation arrangements. More details are provided in the Project Feasibility Report and other TA reports. The implementation is planned and designed to be implemented under 3 project outputs. The project will be implemented under the framework of a new and modernized approach to Integrated Crop and Water Management (ICWM) incorporating; sustainable O&M of the irrigation infrastructure (including field channels, outlets, VRBs etc.), empowered farmer organizations, integrated crop and water management, support for the development of agri-enterprises, the market chain and improved access to finance.

### II. Outputs

2. The project will be aligned with the following impact: national food security increased. The project will have the following outcome: productivity, sustainability, and profitability of farms in the project area increased. To meet the project objectives the project will have three outputs as summarized below.

3. **Output 1: Irrigation infrastructure modernized. Irrigation infrastructure modernized.** This output will modernize approximately 100 FMISs infrastructure covering a command area of 17,452 ha and the Rajapur Irrigation Project (RIP) covering a command area of 14,500 ha to improve performance and increase resilience to climate change. Across those irrigation systems, the project will (i) construct and/or rehabilitate permanent gated intake structures, and protect around 1.5 kilometers of riverbanks and hill slopes to reduce flood and sediment ingress in the system, and improve irrigation system efficiency, and stability and support on-farm irrigation and equitable management of irrigation water—this is through targeted selective irrigation canal lining, improved gated control structures, improvement of cross drainage, and piloting groundwater irrigation for conjunctive use; (iii) construct 12 new pilot hill lift irrigation systems irrigating 1,354 ha, pumping riverside subsurface water at high dry land (*tar*), distribute water by using modern pipe and micro irrigation systems with volumetric regulators ensuring high water use efficiency.

4. The details of the Output activities will include:

- (i) Rehabilitation and upgrading of about 33,306 ha of surface water irrigation including (i) 66 hill irrigation schemes (5,889 ha), 34 terai irrigation schemes (11,563 ha) in Koshi, Madhesh and Bagamati provinces; and (iii) upgrading for modernization of key infrastructure of the Rajapur Irrigation Project (RIP- 14,500 ha) in Lumbini Province. Rehabilitation and upgrading of about 33,306 ha of surface water irrigation including (i) 66 hill irrigation schemes (5,889 ha), 34 terai irrigation schemes (11,563 ha) in Koshi, Madhesh and Bagamati provinces; and (iii) upgrading for modernization of key infrastructure of the Rajapur Irrigation Project (RIP- 14,500 ha) in Lumbini Province. In addition, the project will construct 12 new pilot hill lift irrigation projects (HILPs) (1,354 ha) with lifting of water using modern pumping technology and high efficiency piped water conveyance and distribution system with volumetric regulator in the high lands of the mid-hill areas of Gandaki and Lumbini Provinces.

- (ii) Support in improved on-farm irrigation at all the FMIS subprojects and Rajapur Irrigation Project (RIP). Advanced on-farm irrigation water management including piped, micro irrigation and polyhouses will be supported in the subprojects, including in the HILPs.
- (iii) Implement community groundwater program for conjunctive use with surface water at pilot level in the three selected terai FMIS, using clean energy hydro electric pumps, replacement by electrification of existing diesel pumps in the tubewells under operation.

**5. Output 2: Irrigation and agriculture agencies and farmer organizations strengthened.**

The output will strengthen the management and institutional framework to ensure the project investments meet their targets of irrigation infrastructure modernization, improved water use efficiency, increased productivity, and sustainability. The program will implement an Integrated Crop Water Management (ICWM) approach incorporating climate change; sustainable operation and maintenance (O&M) of the irrigation infrastructure reaching the farm level, crop planning based on farm size and availability of water, empowered farmer organizations, supports the farmers towards establishing agri-enterprises, support in market chain and access to finance. The output will strengthen the capacity of the farmers and the government agencies at federal, provincial and local levels in integrating irrigation management and agriculture development for FMIS. At the farm level, the project will; (i) strengthen capacity of farmers, water users' association (WUA) to better operate and maintain irrigation systems;<sup>1</sup> and (ii) upgrade WUA to water users cooperatives (WUC) in piloting irrigation systems to improve integrated irrigation management and agribusiness functions designed to maximize the opportunities of irrigation investments. The Project will facilitate WUCs in accessing government subsidies provided time to time, rural finance, support for the market chain, facilitate agro-enterprises, and network with private agri-enterprises.<sup>2</sup> The Project will also facilitate WUA/WUC in operating the hill lift irrigation schemes as water utilities introducing metered charging systems and fee collection to help meet full cost recovery for operating costs. The output will update existing ICWM guidelines including design, management and extension support, climate change risks, and develop a road map for the long-term strategy for investment and management of the FMIS schemes in Nepal. The guidelines and parallel training modules will be used to strengthen the capacity of irrigation and agriculture extension workers across Nepal. The program will include:

- (i) Training and strengthening of the devolved institutions with focus on the Water Resources and Irrigation Development Divisions (WRIDDs), Agriculture Knowledge Centres (AKCs), and the irrigation and agriculture units at the local level.
- (ii) Strengthening of field level management including (a) strengthening of WUAs; and (b) explore for establishment of parallel new WUCs who could enhance support in irrigation management operations and agribusiness functions. The farmers will work with the WRIDDs who will support them in the initial establishment and registration of the WUAs. Irrigation management functions will be supported by the WRIDDs/hill lift offices, and agribusiness functions supported by the AKCs. If WUA is upscaled to WUC, the farmers management will initially represent in the WUC board.
- (iii) Enhanced Access to Rural Finance: The project will review current policy and programs for finance and subsidies for irrigation and agriculture. Based on the

<sup>1</sup> The WUAs will remain as core organization for irrigation system, operation and management in all subprojects,

<sup>2</sup> About twenty WUCs will initially establish at pilot level in 12 hill lift, 3 terai FMIS, 2 hill FMIS and 3 in RIP. Subject to the results of the pilots and farmer interest, the WUC program could be upscaled to other sub-projects.

review the project will work with selected local administrations, lending agencies, private sector, WUA and WUC to train new and workable models to improve access and better target financial support for farmers to invest in farm enterprises, on-farm irrigation, irrigation mechanization, agriculture inputs, marketing etc. The program will also address alternative ways to meet financing costs for irrigation maintenance and repairs beyond the capacities of the farmers themselves. This intervention will lead towards higher income to farmers and making the FMIS sector a self-sustaining entity.

6. **Output 3: Modern agriculture and value chain facilities introduced.** The project will address core weaknesses in agriculture development including limited uptake of modern agriculture technologies, lack of mechanization, and agriculture facilities. The project will explore upstream and downstream opportunities to promote value addition including demonstration and training in: (i) adopting climate-smart agricultural practices to improve crop yield, quality and production; (ii) adopting advanced agricultural technologies including modern farm machineries and equipment to enhance efficiency, productivity, and address labor shortages; (iii) value addition through agriculture facilities including collection and processing, storage, and buying and selling of inputs and outputs. The Project will establish digital advisory services which through digital apps and mobile phones will provide information on weather, marketing and agriculture advisory services to improve farmers' operational efficiency and decision-making for climate resilient farming and marketing. The project will facilitate accessing financing to selected WUAs/WUCs. They will be selected based on viable and sustainable business models and demonstrate high interest to invest in modern agriculture machineries and agriculture facilities.<sup>3</sup> The project will help WUA/WUC in obtaining agriculture machinery and WUA facility through partial financing following the working directives of Department of Agriculture (federal DOA). The program will include:

- (i) **Packaging:** Packaging of agricultural technologies and enterprise focusing on the interventions that will make the most impact to the needs of farmers in the sub-project areas and will include planning and management of cropping patterns using farmer field school approach, training and demonstrations including seed multiplications, green manuring, zero tillage, nature-based solution for soil conservation, consolidated farming, and climate smart agriculture also following innovative and proven technologies like alternate wet and dry system of irrigation, new technology based irrigation systems for water use efficiency and water conservation, among others. The training will identify potential business opportunities and promote identification and application of agriculture enterprises.
- (ii) **Demonstrations:** of (a) use of agriculture equipment and machinery to support mechanization to reduce reliance on manual labor; (b) agriculture facilities to improve the marketing and processing including agriculture buying and selling centers, grain storage, machineries storage, cold chambers, WUA office, and polyhouses. The project will procure equipment to be used in the demonstrations which will be assigned to the WUAs/WUCs for future rental to farmers once the demonstrations are completed.
- (iii) **Upscaling:** As a follow-on from the demonstrations the project will provide financial support for selected WUAs/WUCs to invest in modern agriculture machinery. Support will also be provided to WUA/WUCs to construct or rehabilitate WUA/WUC facilities for crop storage and agro processing. The aim will be to support selected investments that can demonstrate a viable and

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<sup>3</sup> The facilitation will be limited to support WUA/WUC in preparing proposal for seeking loan from financial institutions.

sustainable management and business model, be self-financing, and can show significant impact to the viability of the subproject. The project will procure and assign equipment and facilities to the relevant WUA/WUC who will contribute 50% of the costs for machinery and 15% for the WUA/WUC facilities.

- (iv) **Establishment of communications:** through digital advisory services to provide cost effective access to information to the dispersed and remote irrigation areas and stakeholders. The program will include targeted weather, climate change, marketing, and agricultural advisory services. The system will build on existing social media and include videos, SMS, and Apps with emphasis on user need which may encompass different demographic groups of farmers, government, private sector and small-scale entrepreneurs.

### Output 1: Irrigation Infrastructure Modernized

<b>FMIS Hill and Terai</b>	
<b>Description</b>	The project will rehabilitate and upgrade 100 FMIS projects in 3 provinces. In the hill the total area is 5,889 ha (average 89 ha) with an average costs of NRs 311,000/ha (including VAT and excluding contingencies). In the Terai, the total area 11,563 ha (average 340 ha) with an average cost of NRs 289,000/ha (including vat but excluding contingencies).
<b>Implementation responsibility</b>	Will follow the implementation arrangements in the PAM. The PIU for the FMIS schemes will be the WRIDDs.
<b>Design</b>	Schemes have been planned and designed by WRIDD offices using the standard approach of DWRI with some design support by the IMEP TA. As at April 2024, 40 hill schemes and 21 Terai schemes have been designed and bid documents prepared. The remaining 39 schemes design is ongoing by the WRIDDs and is estimated to be completed by mid-2025.
<b>Selection</b>	All the 100 schemes have been selected however there may be some adjustment in scheme selection. Selection of the remaining schemes the selection criteria in the PAM including preparation of WUA consultations and agreement as set out in the SPPR, DDR, IEE. All projects to be selected need to be categorized as B or C for safeguards.
<b>Safeguards</b>	IEEs for all designed projects have been prepared. Resettlement Plan for the project have been prepared Indigenous People's Plan for the project have been prepared
<b>Implementation contract</b>	The works will be implemented by individual contracts for each scheme as described in the procurement plan. The advance contracts will start in Q4/24 with the second batch in Q3/25.
<b>Implementation Community contract</b>	WUAs may participate in earthworks and simple structures up to a value of NRs 4 million each, either through (i) provision of materials and labor under supervision of designated Sub-Engineers or (ii) direct contracting with WUAs where appropriate capacity has been demonstrated. The WRIDD engineers assess the WUA capacity and willingness to perform simple civil works through payable contracts at this stage.

<b>Supervision</b>	<p>The project construction will be the responsibility of the WRIDDs supported by the PIMS consultants and the WUA.</p> <p>The WUA will form a subproject Construction Monitoring Committee (CMC) which will be trained by WRIDDs, CPMO, with assistance from PIMS consultants, on subproject monitoring and reporting arrangements. Representatives of CMC will participate in SMC-WUA progress review meetings along with other key WUA executive members WUAs</p>
<b>Beneficiary Contribution</b>	<p>About 3% of the works will be provided through beneficiary contribution, this will be in kind.</p>
<b>Management</b>	<p>The schemes will be managed by a Water User Associations. WUA have largely been formed in most schemes. The project will provide support to establish and strengthen WUA described under component 2.</p> <p>O&amp;M costs schemes will be fully financed by the beneficiaries. Management, Operation and Maintenance costs will increase under climate change and the costs of O&amp;M including repairs are estimated for Terai and Hill Schemes are estimated to be around NRs 6500/ha per year. The project will develop innovative approaches to strengthen the financing of maintenance.</p>

<b>Hill Lift</b>	
<b>Description</b>	<p>The project will construct 12 new hill lift schemes will provide pumped irrigation on agricultural land on old river terraces, called Tar in Nepal, by using water from perennial rivers in the valleys below. The Tar lands have high potential for multiple cropping but require high head pumping (100-140m) and the development of institutional approaches to ensure the viability and sustainability of the investments The project will also support development of self-sustained and long-term crop intensification and diversification, and market support services. The schemes will include the following components</p> <ul style="list-style-type: none"> <li>• Intake: abstracting water from the riverbed for which various options are proposed in the feasibility studies. The three advanced projects have deep gravel beds which are suitable for tubewells which is a well-tested approach. The intakes will be fully tested during the winter and spring periods before construction of the remainder of the systems.</li> <li>• Power requirements and access to electric power is not a constraint but formal approval to abstract power will be required prior to initiating any construction.</li> <li>• Delivery main will be constructed from the intake pump station to the header tanks.</li> <li>• Most sites require single stage pumping but in one case two-stage pumping has been considered. Pumps are designed to operate up to 16 hours/day.</li> <li>• Header reservoirs will be located on high ground and will provide 8 hours storage.</li> </ul>

	<ul style="list-style-type: none"> <li>Distribution systems: will be piped and will flow by gravity from the header reservoir. Flow will be metered at each hydrant</li> </ul>
<b>Schemes</b>	<b>Madi River Corridor</b>
	1 Baireni <b>49</b>
	2 Dumsi <b>102</b>
	3 Duipiple 125
	4 Sishagat 50
	5 Kalesti 135
	<b>Kaligandaki River Corridor</b>
	6 Tilakpur 106
	7 Pyakluk 109
	8 Ekletar 158
	9 Ramtaar 91
	10 Majhigaun 61
	11 Siko Danda 14
<b>Marsyangdi River Corridor</b>	
12 Chayanglitar <b>415</b>	
<b>Total</b> <b>1415*</b>	
<p>*Note: The total area will be finalized after detailed design. For now it is considered approximately 1,354 ha for planning purposes.</p> <p>Designs for 3 schemes have been prepared. Groundwater drilling and installation of tubewells for 2 sites is ongoing by DWRI and remaining sites will start under the project in Q1/2025. The design of the 3 subprojects prepared earlier than others will be finalized after subsurface boring data is available.</p>	
<b>Implementation responsibility</b>	PIUs for the 12 hill-lift irrigation projects (HLIPs) will be the Irrigation and River Management Project, Gorkha and People's Embankment Office, Butwal
<b>Design</b>	Feasibility studies have now been carried out for 13 schemes; four by Tractabel/ TMS (Tr-TMS 2019) and nine by Fulbright/CMS (Ful/CMS 2022). Detailed design for advance 3 schemes has been prepared by the IMEP TA 2023/24.
<b>Selection</b>	All the 12 schemes have been selected during the feasibility studies. The three advance schemes were selected from the 12 schemes during the TA based on a simple ranking system. The list of the remaining 9 schemes will be finalized based on the consultants with the beneficiary farmers and implemented through a single contract for each of the HLIPs as described in the procurement plan.
<b>Safeguards</b>	A resettlement plan has been prepared for 1 of the scheme Bareini,
<b>Implementation Plan</b>	The projects will be implemented in 2 stages (i) construction of the intake and (ii) construction of the pumps delivery main, header and distribution system. The contracts will follow the procurement plan; 2 tubewell construction contracts (7 sites, and 5 sites) and 2 contracts of the hill lift construction.

<b>Implementation Community contract.</b>	No community contracts are proposed
<b>Supervision</b>	The contracts will be supervised by the HLIP project offices with support by the PIMS team.
<b>Beneficiary Contribution</b>	No beneficiary contribution is proposed
<b>Scheme Management</b>	<p>The establishment of a strong scheme management is essential to the HLIPS. The scheme management will be in two parts establishing the WUAs as per requirements set out Water Resource Act of 1993 (revised in 2019) and the Irrigation Regulation of 2000 (revised in 2015)</p> <p>The management of the schemes will however be assigned to new Water User Cooperatives (WUCs) who will manage the irrigation operations operating effectively as water utility organizations who will have full responsibility for management, operation and maintenance to provide water to the hydrants based on a volumetric charging system. In parallel the WUCs will support agribusiness functions and will promote agribusiness through business advisory services, input supply management, output marketing, value addition, financial services, market intelligence, extension services, and infrastructure development. The board of directors of the WUCs will initially incorporate the key representatives of the WUA.</p> <p>The construction contract includes a provision for the contractor to support operation costs for 2 years after completion of construction. Operation costs will be subsidized for an initial 2 years after which farmers will need to pay full MOM costs.</p> <p>The establishment of the WUA and WUC are described in Output 2. The detailed institutional arrangements for the WUC including the constitution will be developed by the Individual and PIMs consultants during the Q1 2025.</p>
<b>Requirements to support the establishment of the Hill Lift Projects during 2024</b>	<p>Brief project beneficiaries on proposed HLIP -focusing on the 3 subprojects.</p> <p>Explain the institutional arrangements and the need to; establish the WUA and WUC, broadly explain role of WUC and the need for full OM cost recovery.,</p> <p>Establish the WUA for the 3 subprojects</p> <p>Brief beneficiaries on the role and functions of the WUC</p> <p>Obtain written agreement to abstract power-agree tariffs</p>

<b>Rajapur</b>	
<b>Description</b>	The proposed works under the proposed are based on the recent feasibility study (FBC/CMS 2022) and updated and refined under the project preparation team. Full rehabilitation is not possible within the available budget and likely uneconomic and the project will focus on the most critical works. The following works are proposed under the project.

	<ul style="list-style-type: none"> <li>• Approach channel: Preliminary designs for an improved approach channel have been prepared including new western bank from gabion boxes with launching apron, debris exclusion etc. Design of approach channel to be reviewed by PIMS consultant in 2025. It is very difficult to construct a permanent structure without high risk of damage and a lower cost semi-permanent structure may be preferred, under advance works only repair to existing gabions proposed.</li> <li>• Budhi Khola Intake: Fit electrically operated gates to the existing Budhi kulo intake, improve trash exclusion arrangements, and construct new scour sluice to minimize sedimentation of canals.</li> <li>• Riverbank Protection: Reform riverbanks in critical locations and protect them with revetment and stud spurs.</li> <li>• Budhi kulo weirs and branch canal structures: Provide gates on regulators where not already installed, provide escapes and additional branch canal structures to enable better control of water.</li> <li>• Sediment Control: Provide sluiced settling basins initially on five of the 11 branch canals and monitor performance of new intake arrangements for sediment control.</li> <li>• Eastern Intakes: Upgrade existing intakes provide flushing sluice.</li> <li>• To support the requirements of clearing sediment from the intakes it is proposed to procure excavators that will be assigned to the WUA</li> </ul>
<b>Implementation responsibility</b>	<p>The project will be implemented by the Rajapur Irrigation Management Office (RIMO) is already established and will be the PIU for the civil works in RIP. The RIMO will also support the implementation of Output 2, including strengthening the WUA and piloting the establishment of the WUCs in each major branch canal.</p> <p>The Rajapur Agriculture Management Office (RAMO) will be established to implement the agriculture component under the RIP</p>
<b>Design</b>	<p>The advance works which are around 50% of the total investment have been designed by the TA consultant and will be implemented through 2 contracts. The remaining works will be designed by the PIMS consultant during 2025 and implemented through 2 contracts.</p> <p>The specifications of the excavators need to be prepared including a detailed analysis of the type and quantity of work and operational requirements and capacities of the WUA. A separate procurement contract for procurement of excavators will be tendered in Q3/2025</p>
<b>Selection</b>	All the works under the project have been selected
<b>Safeguards</b>	<p>An IEEs for the project has been prepared.</p> <p>A Resettlement Plan and Resettlement Framework has been prepared.</p> <p>An Indigenous People’s Plan has been prepared.</p>
<b>Implementation contract</b>	The works will be implemented by individual contracts for each scheme as described in the procurement plan. The advance contracts will start in Q4/24 with the second batch in Q3/25
<b>Community contract</b>	No community contracts proposed
<b>Supervision</b>	The project construction will be the responsibility of the WRIDDs supported by the PIMS consultants and the WUA

	The WUA will form a subproject Construction Monitoring Committee (CMC)
<b>Beneficiary Contribution</b>	No direct beneficiary contribution proposed
<b>Management</b>	There is some uncertainty about the management responsibilities of the RIP. It is classed and is currently managed by the WUA but many of the large new structures are perceived by farmers to be government-owned and thus the responsibility of the government. As a result, many structures are not operated correctly or at all, and some maintenance is neglected. Responsibilities for MOM need to be clearly defined and agreed between WUA and RIMO, together with consideration of any new WUCs and recognising the increased role of Local Government. Updated guidelines for the management of the RIP will be prepared by the project consultants based on consultations with stakeholders. The guidelines will incorporate the role of the WUA and the WUC.
<b>Other requirements</b>	The Rajapur Irrigation project faces various issues, one of the most critical is the long-term morphology of the river channel proportion of flow available to the east bank. The project does not incorporate any planning for river training due to the complexity of hydrological, technical, social, and environmental issues. To better understand the issues and to raise awareness the project will establish a Rajapur Stakeholder forum -this is described in output 2. Sediment is a major problem and there is a need to monitor sediment levels to help and plan long term requirements for sediment exclusion.

<b>On Farm Irrigation Infrastructure under ICWM</b>	
<b>Description</b>	<p>The project will support a program of improved on-farm irrigation (OFI) infrastructure . Under component 1, this relates to physical works. Training and institutional support are described in output 2. The program for OFI will be in three parts.</p> <ul style="list-style-type: none"> <li>• <u>On-farm canal infrastructure</u> is designed for the canal irrigation systems will be provided to the Hill and Terai FMIS and Rajapur. This will include minor canal outlets and structures on the canal laterals. Gravity piped laterals can be considered for the Hill FMIS</li> <li>• <u>Advanced On-farm irrigation</u> will be provided for the hill lift. This will include the procurement, demonstration, and upscaling of equipment to improve irrigation efficiencies and agriculture productivity where high irrigation efficiencies are essential to reduce pumping costs and make management of the schemes affordable. Possible equipment could include additional pipes and hydrants, sprinkler, drip, etc. The project will support a program of demonstrations which will include the equipment but also working with the AKCs to explore the linkages between advanced on farm irrigation and potential agriculture applications including livestock, orchards, polyhouses, kitchen gardens etc. Following on from the demonstrations the project will provide financial support for selected WUAs/WUCs and farmers to invest in advanced on-farm irrigation through an 85% project support subsidy.</li> </ul>

	<ul style="list-style-type: none"> <li>• <u>Pilot community conjunctive groundwater</u> program will be developed at three selected terai FMIS locations covering 1,700ha in total. The pilots will primarily concentrate on the electrification of farmers and other tubewells, with management oversight entrusted to the WUA and WUCs. Use of groundwater is needed in the terai because of water shortages in the dry season, and in some cases even in the monsoon season. It is proposed to demonstrate the program will focus on electrification of tubewells (providing grid electricity and replacing diesel pumps by electric) and establishing a WUC to support integrated surface and ground water. The program will be in three parts: (a) <u>procurement and Installation of Electric Lines and Electric Tubewells</u> for demonstration over 300ha: this will include expansion of mainly single phase power lines, electrification of selected farmer wells, demonstration of improved farmer wells with electric submersible pumps, rehabilitation and electrifying of selected deep tube wells; fully funded by project; (b) <u>demonstration of management</u> working with farmers and the WUCs to understand the potential of conjunctive surface and groundwater management and establish a strong institutional base for community-based groundwater. WUCs will be trained in conjunctive management of surface and groundwater including measures to ensure sustainable abstraction of groundwater. The WUCs and interested farmers from other sites would be able to visit the groundwater demonstration pilots. Demonstrations would be videoed and distributed to other ISPs in the Terai and (c) <u>upscaling</u>: under the program for partial investment subsidies interested WUA/ WUCs in the Terai FMIS or Rajapur would be able to access 85% project subsidies to upscale the program up by 1400ha.</li> </ul>
<b>Implementation responsibility</b>	The implementation of on farm irrigation will be through the WRIDDs or Project Offices supported by the PIMS and Individual consultants.
<b>Design</b>	The detailed approach and planning for the on-farm irrigation will be developed by the project consultants. The design will be participative working with WUA and farmers in selected schemes. Guidelines to OFI will be developed by the project consultants in Q1/2025
<b>Selection</b>	The locations and scope of the OFI need to be determined. The scope and selection criteria will be set out in the approved Guidelines to ICWM including WUAs interested to participate in the OFI would apply to the WRIDDs/Project Offices, WRIDDs in liaison with AKCs would review the applications and compliance with the selection criteria. Applications would be sent to the Provincial Irrigation Ministry who will liaise with the CPMO to review and screen and finalize the selection
<b>Safeguards</b>	The OFI is a component of the subprojects, so no separate environmental and social assessments are required
<b>Implementation contract</b>	The advanced OFI and Pilot Groundwater will be through contractors.
<b>Community contract</b>	On-farm canal infrastructure will be implemented through community contracts with a 3% beneficiary contribution,

<b>Supervision</b>	The project construction will be the responsibility of the WRIDDs supported by the PIMS consultants and the WUA.
<b>Beneficiary Contribution</b>	For the OFI demonstrations all costs will be fully paid by the project. For the upscaling, a 15% beneficiary contribution will be required. The mechanism for this will be developed in the guidelines
<b>Management</b>	The implementation of the OFI will be managed WRIDDs/ RIMO and Hill Lift Project Offices who will hand over responsibilities to the WUA and WUCs

## **Output 2: Irrigation and Agriculture Agencies and Farmer Organizations Strengthened**

### **1. Introduction**

7. The output is designed to develop the management and institutional framework to ensure the project investments meet their targets of irrigation efficiency, productivity, and sustainability.

### **2. New Approach to ICWM under IMEP**

8. The program will be implemented through a new and modernized approach to Crop and Water Management (ICWM) under climate change. The approach will build on the 2021 guidelines but will be significantly wider ranging and incorporate all three outputs of the IMEP project as shown in Figure 1 and will include:

- Reinforcing the linkages between crop productivity and water management;
- Develop an integrated approach with emphasis on training and institutional development across the three outputs;
- Strengthening the capacity of the WUAs and WUCs to plan and implement effective operation and maintenance;
- Integrating the agriculture and water management functions to help increase farmer perceptions of the value of efficient operation and maintenance;
- Clearly defining maintenance responsibilities and strengthening of the devolved agencies to support the irrigation O&M;
- Developing simple tools for asset management to optimize scarce resources;
- Developing integrated and sustainable surface and groundwater management in the terai through the WUA and WUC.
- Review piloting and training in innovative approaches to improve access to finance; and
- Reviewing and developing approaches to maintenance including how to implement unforeseen repairs beyond the farmer resources.
- The project will develop new guidelines for ICWM encompassing irrigation design, management and extension support and develop a road map for the long-term strategy for investment and management of the FMIS schemes in Nepal. The guidelines and parallel training modules will be used to support the project programs and facilitate broader training initiatives for irrigation and agriculture extension workers in Nepal. The guidelines will be prepared by the project implementation consultants.

**Figure 11: New Approach to Integrated Crop and Water Management under IMEP**

Project Components	Irrigation Systems	Irrigation Institutions	Agriculture Systems
<b>1 Infrastructure</b>			
FMIS Hill	WUA participation to ensure systems constructed as per design and specification	WUA/WUC provided adequate training to manage MOM	Farmers aware of potential and opportunities of the investments.
FMIS Terai		WUA and WUC properly established. WUC operating as water utility for Hill Lift	
Hill Lift		WUA/WUC to manage MOM	Farmers understand linkages between productivity and effective irrigation especially under climate change.
Rajapur	Small investment in minor structure	Improved water management	
On farm irrigation	Additional pipes sprinkler polyhouses introduced	Demonstration organized through WUC Upscaling through WUC	Farmers take up high value cropping
Advance On Farm	Expanding electrification Upgrading Farmer and other tubewells	Key role of WUC to manage sustainable surface and groundwater Key role to support upscaling	Promote diversified cropping to take advantage of improved and more secure water.
Pilot Conjunctive Groundwater			

Project Components	Irrigation Systems	Irrigation Institutions	Agriculture Systems
<b>2. Institutions</b>			
Strengthening Devolved Agencies	Responsibilities of devolved agencies defined. Agencies support OM	Devolved Agencies able to support improved OM	Devolved agencies able to support agriculture productivity
Strengthening WUA	WUAs able to ensure sustainable MOM	WUAs strengthened to meet need for increased efficiency and sustainable OM	Farmers better support WUA
Establishing WUC	WUA/WUC providing improved irrigation management Hill Lift WUC operates as water cooperative	WUC piloted in 20 schemes WUCs upscaled New WUCs provide a strong base to support productivity and sustainability,	WUC take on agribusiness functions
Support for improved MOM	Establishing simple asset management systems  Training in canal management	WUA/WUC and devolved agencies trained in asset management and how to apply to real situations	Farmers aware and endorse effective MOM

Enhanced  
Access to Rural  
Finance-  
*developing and  
piloting and  
training in new  
and workable  
models for the  
WUA/ WUCs and  
farmers to  
improve access  
finance*

Improved  
finance can  
support irrigation  
investment, and  
major  
maintenance  
works

Training in the  
role of  
WUA/WUC in  
accessing  
finance for  
farmers and help  
meet WUA/WUC  
needs including  
maintenance,  
agribusiness.  
WUA/WUC  
facilities can be  
expanded  
through  
additional  
financing

Training given to  
farmers to  
facilitate access  
to finance

**Project Components**

**Irrigation Systems**

**Irrigation Institutions**

**Agriculture Systems**

**3. Agriculture**

ADP and IDP Briefing with community and farmers

Proposed program for irrigation presented and discussed

Pre-briefing WUAs on proposed ADP and IDP

Briefing farmers on proposed IDP and ADP

Agriculture Technologies and Enterprise Development

Key parts of the training very relevant to MOM including cropping patterns, nature-based protection, opportunities for consolidated farming

Key role of WUA and WUC in upscaling training.  
  
Training in enterprise very relevant to WUA/WUC

Training and demonstration to farmers in wide range of agriculture technologies

Agriculture equipment and machinery to support mechanization

Mechanized farming reduces times of agriculture operations which provides flexibility in cropping patterns and increased irrigation efficiency

Key role of the WUA/WUC to support mechanization

Agriculture machinery will improve efficiency and productivity and reduce labor, allowing more crops to be grown and harvested within the available time.

Construction of WUA/WUC facilities

Facilities can be used for meetings to support irrigation management

Intensive support to WUA and WUC to maximize the opportunities from the facilities

Facilities designed to financially viable through agribusiness functions

Digital Advisory Systems (DAS)

Improved weather and climate advisory to improve water management

Information appropriate for WUA/WUC which are trained in the various apps  
WUA/WUC to promote the DAS

Information of cropping technologies, weather climate, markets

<b>Strengthening of Key Agriculture and Irrigation Agencies</b>	
<b>Description</b>	<p>The implementation and long-term value of the project investments requires holistic strengthening of the government institutions. Training will incorporate DWRI, DOA (Federal Level), WRIDDs, AKCs (Provincial Level), and Agriculture, Cooperative and Irrigation units at Palika Level. Special attention will be given to strengthening the devolved lower-level institutions.</p> <p><u>Role of Local Government:</u> Irrigation is a shared responsibility between Federal, Provincial and Local Government, but once the project is complete and projects are handed over, Local Government (LG)/Palikas will have an important role with details to be developed during the project, in accordance with overarching developments in implementation of Federalism. Local Governments have some staff and financial resources, with Agriculture Units at Local Level (AULL) and Infrastructure Units at Local Level (IULL) planned to play an important role in supporting completed sub-projects.</p> <p>IULL and AULL staff have limited capacity in formulation, implementation, and monitoring of irrigation and agriculture development plans and programs. They will participate in meetings, workshops, trainings, demonstrations, and other initiatives of IMEP. WRIDDs will implement irrigation and AKCs will implement agriculture related activities of IMEP so that the local units are acknowledged in the project, obtain first-hand experiences of project implementation and management in their municipalities and are able to provide long-term support needed for sustainability.</p>
<b>Implementation responsibility</b>	<p>The program will be under the CPMO and CAMO working closely with the WRIDDs and AKCs.</p> <p>Trainers to be selected but to include in house personnel and specialist as required.</p>
<b>Design</b>	<p>Broad program developed will include detailed plan will be developed by the Project Consultants</p> <p><u>Project Launching/Briefing and Progress Review Workshop</u></p> <ul style="list-style-type: none"> <li>• Federal Level Staffs</li> <li>• Province/Local Level Staffs (1 day every year)</li> </ul> <p><u>Training</u></p> <ul style="list-style-type: none"> <li>• Irrigation and Agriculture Programs for Federal Level Technical Staff</li> <li>• Project Administration &amp; Accounting Training of Federation/Province</li> <li>• Irrigation Development Programs under for Province/Local Level Staff</li> <li>• Agriculture Development Programs for Province/Local Level Staff</li> <li>• Supporting Integrated River Management in Lower Karnali Basin</li> <li>• Strengthening of Devolved Irrigation and Agriculture Agencies</li> </ul>
<b>Selection</b>	<p>Personnel for training to be selected as per the detailed plan</p>
<b>Training Material</b>	<p>To be developed by the project and the project consultants.</p>

<b>Procurement of Equipment</b>	
<b>Description</b>	The project will procure miscellaneous Office Equipment to be distributed to the various project offices.
<b>Implementation responsibility</b>	CPMO will be responsible for procurement.
<b>Selection and Specification</b>	CPMO and CAMO will decide on specification and allocation of equipment.

<b>Modernization of Irrigation and Agriculture Management at the Field Level</b>	
<b>Description</b>	<p>The program will be in four parts</p> <ul style="list-style-type: none"> <li>• Strengthening Existing WUA</li> <li>• Establishing new WUCs (20 pilot subprojects)</li> <li>• Upscaling of new WUCs</li> <li>• Training and support for sustainable ICWM</li> </ul>
<b>Establishing new WUA and Strengthening of Existing Water User Associations</b>	<p>The program will support the establishment of new WUAs and strengthening of existing WUA under the current legal framework. Each WUA will nominate a qualified Community Organizer (CO), from amongst its members, who will be contracted by WRIDD to facilitate WUA strengthening with support from the PIMS consultants. The COs will work closely with the WRIDDs in providing motivation and support to the community. The WRIDDs capacity will be strengthened through the training by PIMS consultants and others.</p> <p><b>Establishing new WUAs:</b> The COs will start with an information campaign for the stakeholders. The inventory of beneficiary households inside the subproject area will then be updated. In this process, direct beneficiaries and other relevant stakeholders will be identified, and a complete list of beneficiaries in the command area will be compiled. Further comprehensive socio-economic baselines will be collected with support from PIMS. Existing <b>Farmers Groups</b> inside the command area will be invited to join the WUA. In the initial stage an <b>ad-hoc Management Committee</b> will be established to promote appropriate representation of various stakeholder groups within the subproject area and representatives from the tail end of the system. PIMS will provide technical assistance to willing WUAs to develop parallel WUCs. Subsequently, the ad-hoc Management Committee will prepare, with help from the COs and PIMS, draft WUA constitution, by-laws, and rules and regulations that define the organizational setup, and operational arrangements and procedures. They will also (i) organize general meetings, (ii) enroll members, (iii) discuss and finalize beneficiary contribution arrangements for investment and O&amp;M, (iv) organize the first WUA general assembly, (v) apply for registration, and (vi) conduct an election within the specified time frame. The WUA will also elect a manager/treasurer and conduct regular meetings to review and promote the progress of WUA establishment and strengthening activities with the presence of the CM, WRIDDs and PIMS.</p>
<b>Establishing New Water User Cooperatives</b>	The proposal to establish WUCs is set out in the Irrigation Master Plan and the approach will be piloted and developed under the IMEP. The two main objectives to establish the WUCs include;

	<ul style="list-style-type: none"> <li>• The lack of nucleus organization at the field level for integrated management of irrigation and agriculture is a significant factor for the low productivity of irrigated agriculture. The integration of irrigation and agriculture functions through new WUCs is intended to address the current disconnect between irrigation and agriculture and strengthen resilience to climate change.</li> <li>• Establishing irrigation and agriculture as a cooperative organization can maximize the opportunities of the irrigation investments including improved access to government subsidies and rural finance for irrigation and agriculture, support for the market chain, facilitate agro-enterprises, and network with private agro-enterprises.</li> </ul> <p>The board of directors of the WUCs will initially incorporate the key representatives of the WUA.</p>
<b>Pilot WUCs</b>	<p>The formation of the WUCs will be carried in stages over the project period including (i) defining the legal and institutional framework, (ii) designing the strategy and approach including the support requirements during the transition, (iii) piloting the approach in 20 selected sub-projects, and (iv) expanding to all the remaining sub-projects subject to the outcome of the pilots. The proposed role of the WUC in the 20 pilot schemes will be as follows:</p> <ul style="list-style-type: none"> <li>• <b>Hill lift schemes (12).</b> It is proposed that management and operations will be fully under the WUC who will operate in the form of a water utility to manage, operate and maintain the schemes. Full recovery of MOM costs will be achieved through metering water provided to each hydrant at the agreed tariff. The WUC will also carry out its agricultural and agribusiness functions. WUA will also be established to ensure that its statutory functions are undertaken. The WUC board will be linked to or the same as the WUA.</li> <li>• <b>Terai FMIS (3) and Rajapur (2).</b> WUCs would be piloted with a focus on improving irrigation from surface water as well as conjunctively with newly-electrified groundwater schemes. The establishment of WUCs will support the program of mechanization and improved agriculture facilities including collection, processing and marketing.</li> <li>• <b>Hill FMIS (3).</b> WUCs will focus on agriculture and agribusiness, the irrigation management functions will initially remain with the WUA with a view to taking over an increasing role in future.</li> </ul>
<b>WUC Upscaling to Other Subprojects</b>	<p>Based on the outcome of the pilot WUCs there will be the opportunity to expand the WUC to other subprojects. WUA will be fully free to choose the approach including continuing the current system of management by the WUA or a partial or full devolvement to the WUC. Some revenue from agribusiness functions may be used to support the short fall of funds for irrigation O&amp;M.</p>
<b>Guidelines to WUC</b>	<p>The individual project consultants will be responsible to prepare guidelines for WUCs. The key person is the international institutional consultant. The national individual cooperatives specialist will play a key role in the piloting of WUCS.</p>

<b>WUC Implementation</b>	The establishment of WUCs will be facilitated by the WRIDDs. WUAs who are interested to establish a WUC will apply to the WRIDD which will arrange registration of the WUC with the cooperative office at the local level
<b>WUC Training Programs</b>	To support the capacity building of newly formed WUCs, training sessions will be organized by the WRIDDs and AKCs. These training programs will cover various aspects including cooperative management, account management and bookkeeping, marketing management, business and strategic plan development, financial literacy, and other relevant topics. Training material to be developed by the project and the project consultants.
<b>Training and Support for Integrated Crop and Water Management (ICWM)</b>	Guidelines for the program of ICWM will be prepared by the project consultants. Training and support for ICWM will include: <ul style="list-style-type: none"> <li>• Training support for On-Farm Management Activities.</li> <li>• <b>Developing</b> sustainable conjunctive surface and groundwater in the pilot groundwater subprojects</li> <li>• <b>Preparing</b> guidelines material and training modules for ICWM including audio visual material.</li> <li>• Training in ICWM</li> <li>• Support the establishment of training in the curricula of irrigation and agriculture training institutes.</li> <li>• Support the establishment of a certificate of accreditation in ICWM of extension workers.</li> </ul>

<b>Enhanced Access to Rural Finance</b>	
<b>Description</b>	<p>Lack of access to finance is one of the key constraints to modernization of agriculture resulting in continued traditional labor-intensive subsistence agriculture. There are complex systems of subsidies and credit programs with the result that some support programs have little value and can even be counterproductive.</p> <p>The project will review current policy and programs for finance and subsidies for irrigation and agriculture. The lesson learnt under other programs including the ADB Rural Enterprise Financing Project which promotes and finances commercial agribusiness enterprises collective owned by small farmers (collective enterprises) and individual small enterprises (individual enterprises) through Small Farmers Development Bank which provides wholesale loans to small farmer cooperatives (similar to the WUC) who subsequently relend to their small famer members.</p> <p>Based on the review the project will work with selected local administrations, lending agencies, private sector, WUA and WUC to train them in new and workable models to improve access and better target financial support for farmers to invest farm enterprises, on-farm irrigation, and upgrading of irrigation. Some pilot financing initiatives will be supported and monitored. The program will also address alternative ways to meet financing costs for maintenance and repairs beyond the capacities of the farmers themselves.</p>

<b>Implementation responsibility</b>	CPMO working with WRIDDs and AKCs, Hill Lift Project Offices and RIP, RAMO in a few selected subproject
<b>Design of the Program</b>	The International and National Finance specialists will undertake a review of current financing systems for irrigation and agriculture. They will design a pilot program of training and a pilot program of streamlined and innovative financing initiatives.

### Output 3: Modern Agriculture and Value Chain Facilities Introduced

<b>Agriculture Development Program Briefings with Project Farmers</b>	
<b>Description</b>	<p>Farmers will be briefed on the overall project program including the infrastructure, institutional and agriculture development program and the overall program of ICWM</p> <p>The briefings will be held three times over the project period with the objective of briefing and obtaining feedback from farmers which will be used to refine the programs.</p>
<b>Implementation</b>	AKCs supported by PIMs consultants

<b>Agriculture Technologies and Enterprise Development</b>	
<b>Description</b>	<p><b>Main components:</b> The main components will be the cropping pattern Farmer Field School (FFS), seed multiplication business, compost-making demonstrations, and consolidated farming.</p> <ul style="list-style-type: none"> <li>• <b>Cropping Pattern FFS:</b> FFSs are an approach to help farmers diagnose problems, find solutions, and devise effective strategies to adopt innovative practices in all three seasons (monsoon, winter and spring). They empower farmers to make informed decisions on crop types and varieties based on various factors such as crop duration, yield, seed availability, climate resilience, pest and disease tolerance, water requirements, critical irrigation periods, personal preferences, market demand and access, and profitability. The learnings of the FFS will be disseminated through documentation of best practices, challenges and outcomes; workshops and seminars; field days encouraging participant farmers to share their experiences; production of brochures and posters; partnerships with NGOs, research institutions, and government agencies to reach a larger audience; feedback and follow-up using digital platforms and social media.</li> <li>• <b>Seed Multiplication Business Demonstration:</b> Most farming communities face problems of access to quality improved seeds. Seed multiplication demonstrations will be conducted so that farmers learn knowledge and skills of seed multiplication and upscale it as a business. AKC will consult with leader farmers to identify willing farmers and location which has potential for upscaling seed multiplication as business. The demonstration will be conducted for paddy seed in one hectare in each sub-project linking with the market, insurance and seed certification system so that precious seed is not used as food grain.</li> <li>• <b>Compost Making Demonstration:</b> It aims to address the inefficiencies and shortcomings of improper and traditional composting methods, which often lead to prolonged decomposition, wastage of resources, and susceptibility to insect and disease infestations. This demonstration will be implemented across all ISPs to ensure widespread adoption of effective composting practices. To ensure effective demonstration, comprehensive training sessions on improved composting techniques will be provided.</li> </ul>

- **Consolidated Farming:** Nepal's farming is dominated by smallholder farmers with small, scattered parcels of land. Under consolidated farming, several small plots are combined into a single large farm which should show economies of scale, improved water and resource management and enable more efficient mechanization and overall efficiency. There are legal implications such as redistribution of land and ownership certificates, land zoning and land-use and environmental regulations. AKCs will conduct demonstrations in Terai FMISs and Hill Lift.
- **Support for Enterprise Development:** Supporting farmers to develop enterprises after conducting demonstrations and technical training. This will include technical skills related to the demonstrated practices as well as business management, marketing, and financial literacy.

Minor Components A range of much smaller interventions are planned for some ISPs. These include:

- **Green Manuring Demonstrations:** It offers several benefits to farmers and the environment like nutrient enrichment, reduced use of imported chemical fertilizers, addition of organic matter, suppression of weeds, and breaking disease and pest cycles.
- **Minimum Tillage Demonstrations:** It leads to more sustainable and profitable agriculture while also promoting soil and environmental conservation such as preservation of soil structure, reduced soil erosion, moisture conservation, weed control, improved soil health, and economic benefits.
- **Plastic Mulch Demonstrations:** Plastic mulch controls weeds, conserves soil moisture, regulates temperature (particularly at early crop stage), reduces soil erosion, and improves crop quality and controls diseases (by preventing soil splash onto plants and reducing contact with pathogens). Farmers will also be taught about reuse and disposal of used plastic mulch as sustainability and environmental considerations are important.
- **Nature Based Protection:** Bamboo planting along riverside agricultural land can control erosion, conserve the environment and support livelihoods, but it requires careful planning and community involvement to ensure its success. AKC will plan demonstrations on vulnerable sites in the Terai, in consultation with communities.
- **Biogas:** Cow dung is commonly used as fuel in Terai, but it is advantageous to generate biogas from organic wastes which provides both a fuel as well as decomposed solid material which can be used as plant nutrient. AKC will organize awareness campaign in each Terai FMIS and help farmers to obtain technical, financial and other support from appropriate institutions to install biogas plants.
- **Soil Testing:** Periodic soil testing helps farmers make informed decisions about irrigation, fertilizer application and crop selection ultimately leading to higher yields and reduced environmental impact. AKC will conduct soil testing demonstration (@ 30 samples/subproject) preferably in seed production pockets.

	<ul style="list-style-type: none"> <li>• <b>Crop Cutting:</b> AKC will measure the harvested crop from sample plots within a field of Paddy, Wheat and Maize in the first and the last year of the project</li> </ul>
<b>Implementation</b>	The program will be further designed and refined by the CAMO and PIMS consultants including preparation of training support materials.

<b>Support for Development of Agriculture Mechanization</b>	
<b>Description</b>	<p>With the increasingly aging farmer population and the high levels of migration to cities and overseas, mechanization of agriculture activities will be given a high priority under the project. The program will be in three parts.</p> <ul style="list-style-type: none"> <li>• Procurement of Agriculture Machinery: Selected and innovative agriculture machinery will be procured by the AKCs to support the demonstrations.</li> <li>• Training and Demonstrations Program to Support Mechanization: Agriculture machinery will be demonstrated and guidance on the options to support for upscaling of mechanization under the project. This will be implemented by the AKCs supported by the WUA and WUCs.</li> <li>• Following on from the demonstrations the project will provide financial support for selected WUAs/WUCs to invest in modern agriculture machinery. The aim will be to support selected investments that can demonstrate a viable and sustainable management and business model, be self-financing and can show significant impact to the viability of the subproject. The project will procure and assign equipment and facilities to the relevant WUA/WUC which will contribute 50% of the costs for machinery.</li> </ul>
<b>Implementation responsibility</b>	The CAMO will have overall responsibility to refine and undertake the detailed design of the program and responsibilities. Implementation will be through AKCs.
<b>Design</b>	The program design requires further refinements which will be prepared by the project consultants and endorsed by the CAMO.
<b>Selection</b>	<p>The program requires selection on how the limited project resources can be best allocated to the various subprojects. CAMO supported by the project consultants will develop an allocation plan and the approval processes incorporating the following.</p> <ul style="list-style-type: none"> <li>• Based on demonstration or training interested WUA or WUA/WUC who want to invest in machinery will prepare an application(s) and send to the SMC to review and endorse.</li> <li>• Successful applications will be sent to Province who will further review based on the criteria for selection.</li> <li>• Province will forward the applications to the CAMO who will review and approve based on the available finances.</li> </ul>

<b>Support for Development of Agriculture Facilities</b>	
<b>Description</b>	The lack of Agriculture Facilities such as collection and processing center, cold storage and grain stores, office and vending area for the WUC reduces the potential of agricultural productivity. Such

	<p>infrastructure can streamline the agricultural value chain, reduce post-harvest losses and increase farmers' income. It will enhance farmers' ability to take advantage of multiple cropping seasons and market their products efficiently.</p> <p>The program will incorporate:</p> <ul style="list-style-type: none"> <li>• Training and awareness of the potential role of agriculture facilities. The project will support visits to successful and less successful agriculture facilities;</li> <li>• The role of the WUA/WUC to support the development of viable and sustainable agriculture facilities;</li> <li>• The opportunities under the project to support the construction or rehabilitation of agriculture facilities and</li> <li>• Implementation of a program through the WUA/WUC to construct rehabilitate the agriculture facilities. The project would meet 85% of the finance costs.</li> </ul>
<b>Implementation responsibility</b>	The CAMO will have overall responsibility to refine and undertake the detailed design of the program and responsibilities. Implementation will be through AKCs.
<b>Design</b>	The program design requires further refinements which will be prepared by the project consultants and endorsed by the CAMO.
<b>Selection</b>	The program requires selection on how the limited project resources can be best allocated to the various subprojects. CAMO supported by the project consultants will be required to develop an allocation plan and the approval processes. Selection will follow the same processes as for agriculture machinery.

<b>Development of Digital Advisory Services</b>	
<b>Description</b>	<p>The dispersed nature of irrigation with numerous small schemes in remote areas in Nepal poses challenges of communication. Effective communication between the different agencies and levels of government and the different sub-project stakeholders is critical to support the project activities as well as long term needs of irrigation and agriculture. Communities and individual farmers also require advice and information on a wide range of subjects including weather, climate change, water and agriculture management, crop technologies, agricultural services, input supply, prices, and markets and so on. Digital Advisory Services (DAS) will be developed to meet this need.</p> <p>Smartphones are widely used even in remote areas, enabling cost-effective access to reliable real-time information which will help overcome the impacts of remoteness and exclusion. Information can be disseminated to farmers, WUAs and WUCs through mobile apps and social media to supplement traditional methods such as community meetings and notices. The project will support partnerships with government agencies, NGOs, international development organizations and the private sector to develop and implement effective advisory systems to support IMEP and long term.</p>

It is initially envisaged that the DAS will be managed through a non-profit making semi-autonomous agency working under a board of directors including government, non-government and representative farmers and water users but the structure and institutional arrangements may be modified during project implementation. It is expected that the digital advisory unit will become self-financing with operation costs supported by advertising and marketing initiatives from private sector suppliers.

DAS will be used initially to communicate about project implementation and to provide long-term support for irrigated agriculture and related topics.

It is expected that the tools will support :

- Institutional development for WUAs and WUCs;
- Irrigation planning and management;
- Best agricultural practices;
- Cropping systems, pests and diseases;
- Input supply, prices and markets;
- Weather forecast and alerts;
- Use satellite imagery and geographic information systems for mapping and data management;
- Climate change and likely impacts; and
- Gauging public perceptions.

The DAS will focus on creating appealing user experiences through well-produced but low-cost materials aimed at a range of different demographic groups (older, younger, male, and female farmers; landowners, tenant farmers; and entrepreneurs). The services will make use of the extensive ownership of data-capable mobile phones in rural areas to improve interactions between the project organizations at different levels, the WUAs and WUCs, individual farmers, private sector suppliers and markets, other government agencies and NGOs, and other interested stakeholders.

The service will initially build on currently available and commonly used media, The design of the digital advisory services will be flexible and will be prepared by the project implementation consultants, drawing on existing digital services such as *geokrishi* and *krishiguru* apps. The project will encourage innovation and invite digital entrepreneurs to contribute ideas (including use of emerging technologies such as artificial intelligence), rather follow a predetermined structure which might be sub-optimal: there is a thriving digital community in Nepal with a diverse range of skills which can be fostered to support the requirements of the project and fit in with the local context.

The target audience will be closely involved in design of the service, starting with an in-depth assessment where farmers currently engage and access farming information. Regular evaluation and adaptation based on user feedback will also ensure the DAS' effectiveness and sustainability.

<b>Implementation responsibility</b>	The CAMO working closely with the CPMO
<b>Design</b>	The design of the DAS will be prepared by the individual international digital communication consultant and the PIMS communication consultant. Budget under output 3 has been allocated to contract the program through small packages of non-consulting services.

**III. Detailed Schedule of Activities**

9. The detailed schedule of activities is shown in the figures below







**APPENDIX 7: TEMPLATE FOR CONSOLIDATED FINANCIAL INFORMATION**

**Appendix 7.1: Statement of Cash Receipts and Payments by Category**

	Reporting Period (Quarterly /Semi- annually)	Year to date	Cumulative	Hard commitments (contracts signed notpaid)
In the currency of the financial statements				
Cash receipts				
ADB Advance/Replenishments	Q	Q*	Q <sup>^</sup>	
ADB Direct Payments	P	P*	P <sup>^</sup>	
LIADB Reimbursement/Retroactive Financing	U	U*	U <sup>^</sup>	
Government	S	S*	S <sup>^</sup>	
Total	T=Q+P+S+U	T*=Q*+P*+S*+U*	T <sup>^</sup> =Q <sup>^</sup> +P <sup>^</sup> +S <sup>^</sup> +U <sup>^</sup>	
Payments				
Civil Works	A	A*	A <sup>^</sup>	A**
Consultancy services	B	B*	B <sup>^</sup>	B**
Project administration	C	C*	C <sup>^</sup>	C**
Other related costs	D	D*	D <sup>^</sup>	D**
Total expenditures	E=A+B+C+D	E*=A*+B*+C*+D*	E <sup>^</sup> =A <sup>^</sup> +B <sup>^</sup> +C <sup>^</sup> +D <sup>^</sup>	E**=A**+B**+C**+D**
Opening cash balance	H	H*	H <sup>^</sup>	
Closing cash balance	K=H+T-E	K*=H*+T*-E*	K <sup>^</sup> =H <sup>^</sup> +T <sup>^</sup> -E <sup>^</sup>	



## APPENDIX 8: PROCUREMENT PLAN

### Basic Data

<b>Project Name:</b> Irrigation Modernization Enhancement Project	
<b>Project Number:</b> 56218-001	<b>Approval Number:</b>
<b>Country:</b> Nepal	<b>Executing Agency:</b> Ministry of Energy, Water Resources and Irrigation
<b>Project Procurement Risk:</b> Moderate	<b>Implementing Agency:</b> Department of Agriculture, Ministry of Agriculture and Livestock Development, Department of Water Resources and Irrigation formerly known as Department of Irrigation, Jawalakhel, Ministry of Agriculture and Livestock Development, Ministry of Energy, Irrigation and Water Supply, Ministry of Industry, Agriculture and Cooperatives, Ministry of Land Management, Agriculture and Coop., Ministry of Water Supply, Energy and Irrigation, Ministry of Water, Irrigation and Energy
<b>Project Financing Amount:</b> US\$ 133,640,000 <b>ADB Financing:</b> US\$ 85,000,000 <b>Cofinancing (ADB Administered):</b> US\$ 30,000,000 <b>Non-ADB Financing:</b> US\$ 18,640,000	<b>Project Closing Date:</b> 30 June 2031
<b>Date of First Procurement Plan:</b> 17 September 2024	<b>Date of this Procurement Plan:</b> 17 September 2024
<b>Procurement Plan Duration:</b> 18 months	<b>Related to COVID-19 response efforts:</b> No
<b>Advance Contracting:</b> Yes	<b>Use of e-procurement (e-GP):</b> Yes <a href="http://www.bolpatra.gov.np">www.bolpatra.gov.np</a>

### A. Methods, Review and Procurement Plan

Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, and consulting services.

Procurement of Goods and Works	
Method	Comments
Open Competitive Bidding (OCB) for Goods	Nationally advertised for all goods packages for vehicles and agriculture equipment
Request For Quotation for Goods	For computer, office equipment and other off-the shelf goods valued at less than USD 30,000 and Non-consulting services
Community Participation in Procurement for Goods	Each contract up to NPR 4 million. Small service contracts may be directly contracted. Works considered non-competitive in nature, labor intensive and can be carried out by the communities.
Open Competitive Bidding (OCB) for Works	Nationally advertised for all works proposed under the Project
Community Participation in Procurement for Works	Each contract up to NPR 4 million. Small service contracts may be directly contracted. Works considered non-competitive in nature, labor intensive and can be carried out by the communities.

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	Quality: Cost Ratio 70:30 to 90:10 based on justification.
Competitive for Individual Consultant	For other technical experts that are not sourced through a firm selection

### B. Lists of Active Procurement Packages (Contracts)

The following table lists goods, works, non-consulting and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan duration.

Goods and Works							
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date (quarter/year)	Comments
CW-01	Construction/Rehabilitation of Sita Daans Kerkha Irrigation Sub Project	1,250,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Morang</p>
CW-02	Construction/Rehabilitation of Aadarsha Paini Irrigation Sub Project	470,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p>

							<p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Morang</p>
CW-03	Construction/ Rehabilitation of Sabju Khola Bhalukhop ISP	210,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Khotang</p>
CW-04	Construction/ Rehabilitation of Kharuwa Khola Ekchhange Irrigation Sub Project	320,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p>

							<p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Khotang</p>
CW-05	Construction/ Rehabilitation of Tengra Khola Shera Baandh Irrigation Sub Project	280,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sunsari</p>
CW-06	Construction/ Rehabilitation of Kajara Khola Kathaghara Baandh Irrigation Sub Project	210,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p>

							<p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sunsari</p>
CW-07	Construction/ Rehabilitation of Hadiya Khola Avinahar Irrigation Sub Project	610,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Jhapa</p>
CW-08	Construction/ Rehabilitation of Pathibhara Krishi Kulo Irrigation Sub Project	430,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p>

							<p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Jhapa</p>
CW-09	Construction/ Rehabilitation of Nunsari Khola ISP	290,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Ilam</p>
CW-10	Construction/ Rehabilitation of Mangaltar-Dhansar Irrigation Sub Project	420,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document:</p>

							<p>Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Ilam</p>
CW-101 to CW-102	<p>Tube well boring in 7 Hill Lift Irrigation Projects (Pilot Project) in four districts</p> <p>Lot 1: CW 101</p> <p>Lot 2: CW 102</p>	<p>200,000.00</p> <p>100,000.00</p> <p>100,000.00</p>	OCB	Prior	1S2E	Q4 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 2</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU Financed by SFD</p> <p>Complexity Level: Level 1</p> <p>Complexity Level: Level 1</p>
CW-103 to CW-104	<p>Tube well boring in 5 Hill Lift Irrigation Projects in four districts</p>	200,000.00	OCB	Post (Sampling)	1S2E	Q1 / 2025	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 2</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p>

	<p>Lot 1: CW 103</p> <p>Lot 2: CW 104</p>	<p>100,000.00</p> <p>100,000.00</p>					<p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU Financed by SFD</p> <p>Complexity Level: Level 1</p> <p>Complexity Level: Level 1</p>
CW-105 to CW-107	<p>Construction of 3 Hill Lift Irrigation Project in four districts</p> <p>Lot 1: CW 105</p> <p>Lot 2: CW 106</p> <p>Lot 3: CW 107</p>	<p>1,700,000.00</p> <p>566,667.00</p> <p>566,667.00</p> <p>566,666.00</p>	OCB	Prior	1S2E	Q3 / 2025	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 3</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU Financed by SFD</p> <p>Complexity Level: Level 1</p> <p>Complexity Level: Level 1</p> <p>Complexity Level: Level 1</p>
CW-108 to CW-116	<p>Construction of 9 Hill Lift Irrigation Project in four districts.</p>	<p>10,800,000.00</p>	OCB	Prior	1S2E	Q4 / 2025	<p>Non-Consulting Services: No</p> <p>Advertising: National</p>

							<p>No. Of Contracts: 9</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU Financed by SFD</p> <p>Complexity Level: Level 1</p>
	Lot 1: CW 108	1,200,000.00					
	Lot 2: CW 109	1,200,000.00					
	Lot 3: CW 110	1,200,000.00					
	Lot 4: CW 111	1,200,000.00					
	Lot 5: CW 112	1,200,000.00					
	Lot 6: CW 113	1,200,000.00					
	Lot 7: CW 114	1,200,000.00					
	Lot 8: CW 115	1,200,000.00					
	Lot 9: CW 116	1,200,000.00					
CW-11	Construction/ Rehabilitation of Lewa Khola ISP	190,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level:</p>

							<p>Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Ilam</p>
CW-117	Repair of Budi Khola approach channel, Upgrading Budi Kulo Intake and Karnali river protection of Rajapur Irrigation Project.	8,400,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: RIMO</p>
CW-118	Construction of main, branch and Secondary canal structures and Rehabilitation of Geruwa kulo intakes of Rajapur Irrigation Project.	7,200,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p>

							Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: RIMO
CW-119	Upgrading of Budi khola approach channel-II of Rajapur Irrigation Project	2,700,000.00	OCB	Post (Sampling)	1S1E	Q4 / 2025	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: No  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: RIMO Financed by SFD
CW-12	Construction/ Rehabilitation of Khang Khola Titire Bimire Phalate Irrigation Sub Project	230,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works

							<p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Panchthar</p>
CW-120	Construction/ Rehabilitation of Branch and Secondary canal structures- of Rajapur Irrigation Project.	10,300,000.00	OCB	Post (Sampling)	1S2E	Q4 / 2025	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: RIMO Financed by SFD</p>
CW-13	Construction/ Rehabilitation of Naya Kulo Irrigation Sub Project	240,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p>

							<p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Panchthar</p>
CW-14	Construction/ Rehabilitation of Khokse Nagkholyang Irrigation Subproject	150,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Taplejung</p>
CW-15	Construction/ Rehabilitation of Nebu Khola Irrigation Sub Project	180,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p>

							<p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Tablejung</p>
CW-16	Construction/ Rehabilitation of Karange Kulo ISP	210,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Terahthum</p>
CW-17	Construction/ Rehabilitation of Lambu Khola Irrigation Sub Project	530,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p>

							<p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Terhathum</p>
CW-18	Construction/ Rehabilitation of Birendra Kulo Irrigation Sub Project	300,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dhankuta</p>
CW-19	Construction/ Rehabilitation of Tindovane Kerabari Irrigation Sub Project	270,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p>

							<p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dhankuta</p>
CW-20	Construction/ Rehabilitation of Kenwa Khola Fituwa Malibheg ISP	140,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sankhuwasabha</p>
CW-21	Construction/ Rehabilitation of Pangma Khola Badareni Irrigation Sub Project	90,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p>

							<p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sankhuwasabha</p>
CW-22	Construction/ Rehabilitation of Yangtang Khola Irrigation Sub Project	110,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Bhojpur</p>
CW-23	Construction/ Rehabilitation of Simle Naya Kulo Irrigation Sub Project	60,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p>

							<p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Bhojpur</p>
CW-24	Construction/ Rehabilitation of Upper Baruwa Irrigation Sub Project	480,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Udaypur</p>
CW-25	Construction/ Rehabilitation of Beladaha Irrigation Sub Project	330,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p>

							<p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Udaypur</p>
CW-26	Construction/ Rehabilitation of Kul Khola Harkpur Irrigation Sub Project	130,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Okhaldhunga</p>
CW-27	Construction/ Rehabilitation of Dhuseni Khola	130,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p>

	Irrigation Sub Project						<p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Okhaldhunga</p>
CW-28	Construction/ Rehabilitation of Hadahi Irrigation Sub Project	1,120,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Parsa</p>

CW-29	Construction/ Rehabilitation of Gadi Irrigation Sub Project	490,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Parsa</p>
CW-30	Construction/ Rehabilitation of Bhaluhi Suklaiya Irrigation Sub Project	650,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments:</p>

							Responsibility: WRIDD-Bara
CW-31	Construction/ Rehabilitation of Jokaha Dora Irrigation Sub Project	690,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: WRIDD-Bara
CW-32	Construction/ Rehabilitation of Haripurwa Irrigation Sub Project	740,000.00	OCB	Post (Sampling)	1S2E	Q4 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No

							Comments: Responsibility: WRIDD-Sarlahi
CW-33	Construction/ Rehabilitation of Laukath Dhangadha Irrigation Sub Project	440,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: WRIDD-Sarlahi
CW-34	Construction/ Rehabilitation of Chakkarghatta Dewanma Irrigation Sub Project	1,300,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding

							<p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Mahottary</p>
CW-35	Construction/ Rehabilitation of Ladakwa Irrigation Sub Project	70,000.00	OCB	Post (Sampling)	1S1E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Mahottary</p>
CW-36	Construction/ Rehabilitation of Soharna ISP	1,310,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p>

							e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: WRIDD-Dhanusha
CW-37	Construction/ Rehabilitation of Bachhrajia ISP	790,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: WRIDD-Dhanusha
CW-38	Construction/ Rehabilitation of Gagan Irrigation Sub Project	1,690,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: Yes  Bidding Document: Small Works  Complexity Level: Level 1  e-GP: Yes

							<p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sirha</p>
CW-39	Construction/ Rehabilitation of Kajra Irrigation Sub-project	1,040,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Saptari</p>
CW-40	Construction/ Rehabilitation of Jita Irrigation Sub-Project	860,000.00	OCB	Post (Sampling)	1S1E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p>

							<p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Saptari</p>
CW-41	Construction/ Rehabilitation of Dora Paini Raghnathpur Irrigation Sub Project	600,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Rauthat</p>
CW-42	Construction/ Rehabilitation of Aruwa Khola ISP	500,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p>

							e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Responsibility: WRIDD-Rauthat
CW-43	Construction/ Rehabilitation of Dhuple Khola Irrigation Sub Project	110,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Small Works Complexity Level: Level 1 e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Responsibility: WRIDD-Rasuwa
CW-44	Construction/ Rehabilitation of Godawori RT Rajkulo ISP	200,000.00	OCB	Prior	1S2E	Q3 / 2024	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Small Works Complexity Level:

							<p>Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Lalitpur</p>
CW-45	Construction/ Rehabilitation of Bishambhara Irrigation Sub Project	230,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Kathmandu</p>
CW-46	Construction/ Rehabilitation of Chisapani Lahredevi Irrigation Sub Project	80,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p>

							<p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Kathmandu</p>
CW-47	Construction/ Rehabilitation of Jhagadiya Sikre Kulo Irrigation Sub Project	120,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dhading</p>
CW-48	Construction/ Rehabilitation of Sopyang Khola Ghattako Kulo Irrigation Sub Project	120,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p>

							<p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dhading</p>
CW-49	Construction/ Rehabilitation of Muhane Mul Kulo Irrigation Sub Project	150,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Kavre</p>
CW-50	Construction/ Rehabilitation of Barhasaya Sathi Kulo Irrigation Sub Project	130,000.00	OCB	Post (Sampling)	1S1E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p>

							<p>Bidding Document: Large Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Kavre</p>
CW-51	Construction/ Rehabilitation of Mahadev Khola Sishneghari Dittiya ISP	140,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sindhupalchowk</p>
CW-52	Construction/ Rehabilitation of Pokhare Tipling Siran Kulo ISP	170,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p>

							<p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sindhupalchowk</p>
CW-53	Construction/ Rehabilitation of Dorkhu Irrigation Project	80,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Nuwakot</p>
CW-54	Construction/ Rehabilitation of Samari Khola Sithuwaphant Irrigation Project ISP	60,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p>

							<p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Nuwakot</p>
CW-55	Construction/ Rehabilitation of Nausebesi Irrigation Sub-Project	140,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dolkha</p>
CW-56	Construction/ Rehabilitation of Nimkot Besi Irrigation Sub Project	110,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p>

							<p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Dolkha</p>
CW-57	Construction/ Rehabilitation of Bagamati Irrigation Sub Project	200,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Makwanpur</p>
CW-58	Construction/ Rehabilitation of Chau Chau Irrigation Sub Project	230,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p>

							<p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Makwanpur</p>
CW-59	Construction/ Rehabilitation of Shakhmadi Chadaha Sub Irrigation Project	200,000.00	OCB	Post (Sampling)	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sindhuli</p>
CW-60	Construction/ Rehabilitation of Purwari Pachhiyari Irrigation Sub	380,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p>

	Project						<p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Sindhuli</p>
CW-61	Construction/ Rehabilitation of Majhuwa Irrigation Sub-Project	215,000.00	OCB	Prior	1S2E	Q3 / 2024	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: WRIDD-Chitawn</p>
EQ-1	Supply of excavators for RIP	310,000.00	OCB	Prior	1S1E	Q3 / 2025	<p>Non-Consulting Services: No</p>

							Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: No Bidding Document: Goods Complexity Level: Level 1 e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Responsibility: CPMO Financed by SFD
EQ-2	Procurement of Computers and other Equipment	600,000.00	RFQ	Post (Sampling)		Q1 / 2025	Non-Consulting Services: No No. Of Contracts: 6 Advance Contracting: No Complexity Level: Level 1 e-GP: No Covid-19 Response? No Comments: Responsibility: CPMO Complexity Level: Level 1 Complexity Level: Level 1
	Lot 1: Equipment 1	100,000.00					
	Lot 2: Equipment 2	100,000.00					
	Lot 3: Equipment 3	100,000.00					
	Lot 4: Equipment 4	100,000.00					
	Lot 5: Equipment 5	100,000.00					
	Lot 6: Equipment 6	100,000.00					
EQ-3	Procurement of	500,000.00	RFQ	Post		Q2 / 2025	Non-Consulting



	Lot 26: Agri Equipment 26	14,286.00					Complexity Level: Level 1
	Lot 27: Agri Equipment 27	14,286.00					Complexity Level: Level 1
	Lot 28: Agri Equipment 28	14,286.00					Complexity Level: Level 1
	Lot 29: Agri Equipment 29	14,286.00					Complexity Level: Level 1
	Lot 30: Agri Equipment 30	14,286.00					Complexity Level: Level 1
	Lot 31: Agri Equipment 31	14,286.00					Complexity Level: Level 1
	Lot 32: Agri Equipment 32	14,286.00					Complexity Level: Level 1
	Lot 33: Agri Equipment 33	14,286.00					Complexity Level: Level 1
	Lot 34: Agri Equipment 34	14,286.00					Complexity Level: Level 1
	Lot 35: Agri Equipment 35	14,276.00					Complexity Level: Level 1
VS-01	Supply of Vehicles (4WD Jeep/Pickup)	300,000.00	OCB	Prior	1S1E	Q1 / 2025	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting: No  Bidding Document: Goods  Complexity Level: Level 1  e-GP: Yes  e-GP Type: e-Bidding  Covid-19 Response? No  Comments: Responsibility: CPMO
VS-02	Supply of Vehicles (Motorbikes)	100,000.00	OCB	Prior	1S1E	Q1 / 2025	Non-Consulting Services: No  Advertising: National  No. Of Contracts: 1  Prequalification of Bidders: No  Domestic Preference Applicable: No  Advance Contracting:

							<p>No</p> <p>Bidding Document: Goods</p> <p>Complexity Level: Level 1</p> <p>e-GP: Yes</p> <p>e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: CPMO</p>
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Consulting Services							
Package Number	General Description	Estimated Value (in US\$)	Selection Method	Review	Type of Proposal	Advertisement Date (quarter/year)	Comments
CS-01	Project Implementation and Management Support (PIMS) Consultant	3,080,000.00	QCBS	Prior	FTP	Q2 / 2024	<p>Non-Consulting Services: No</p> <p>Type: Firm</p> <p>Assignment: National</p> <p>Quality-Cost Ratio: 80:20 for advance contracting already in procurement based on justification</p> <p>Complexity Level: Level 1</p> <p>Advance Contracting: Yes</p> <p>e-GP: No</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: CPMO</p>
CS-02	Individual International Consultants (i) Irrigation Modernization Specialist (ii) Agriculture Modernization Specialist (iii) Digital Communications Specialist (iv) Finance Specialist	450,000.00	Competitive	Prior		Q1 / 2025	<p>Non-Consulting Services: No</p> <p>Type: Individual</p> <p>Assignment: International</p> <p>Expertise: Agriculture, Irrigation, Digital Communications, Finance</p> <p>Complexity Level: Level 1</p>

							Advance Contracting: No  e-GP: No  Covid-19 Response? No  Comments: Responsibility: CPMO
CS-03	Individual national Consultants (i) Cooperatives Specialist (ii) Finance and Credit Specialist	540,000.00	Competitive	Prior		Q3 / 2024	Non-Consulting Services: No  Type: Individual  Assignment: National  Expertise: Cooperative, Finance and Credit  Complexity Level: Level 1  Advance Contracting: No  e-GP: No  Covid-19 Response? No  Comments: Responsibility: CPMO

**C. List of Indicative Packages (Contracts) Required Under the Project**

The following table lists goods, works, non-consulting and consulting services contracts for which procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan duration).

Goods and Works						
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Comments
CS-05	Developing digital advisory services	200,000.00	RFQ	Prior		Non-Consulting Services: Yes  No. Of Contracts: 2  e-GP: No  Covid-19 Response? No  Comments: National advertisement; Responsibility: CPMO
	Lot 1: DDA Service 1	100,000.00				
	Lot 2: DDA Service 2	100,000.00				
CW-122	Groundwater-	2,400,000.00	OCB	Prior	1S1E	Non-Consulting Services:

	electrification of farmer and deep tubewells of Terai FMIS					<p>No</p> <p>Advertising Type: National</p> <p>No. Of Contracts: 10</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Bidding Document: Small Works</p> <p>e-GP: Yes</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU</p>
	Lot 1: Lot 1	240,000.00				
	Lot 2: Lot 2	240,000.00				
	Lot 3: Lot 3	240,000.00				
	Lot 4: Lot 4	240,000.00				
	Lot 5: Lot 5	240,000.00				
	Lot 6: Lot 6	240,000.00				
	Lot 7: Lot 7	240,000.00				
	Lot 8: Lot 8	240,000.00				
	Lot 9: Lot 9	240,000.00				
	Lot 10: Lot 10	240,000.00				
CW-123	Construction/ Rehabilitation of WUA/WUC facilities in each ISP	5,200,000.00	CPP	Post (Sampling)		<p>Non-Consulting Services: No</p> <p>No. Of Contracts: 123</p> <p>e-GP: No</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIUs (AKCs for FMIS and HLIP/RAMO for RIP)</p>
	Lot 1: Facility 1	42,276.00				
	Lot 2: Facility 2	42,276.00				
	Lot 3: Facility 3	42,276.00				
	Lot 4: Facility 4	42,276.00				
	Lot 5: Facility 5	42,276.00				
	Lot 6: Facility 6	42,276.00				
	Lot 7: Facility 7	42,276.00				
	Lot 8: Facility 8	42,276.00				
	Lot 9: Facility 9	42,276.00				
	Lot 10: Facility 10	42,276.00				

Lot 11: Facility 11	42,276.00
Lot 12: Facility 12	42,276.00
Lot 13: Facility 13	42,276.00
Lot 14: Facility 14	42,276.00
Lot 15: Facility 15	42,276.00
Lot 16: Facility 16	42,276.00
Lot 17: Facility 17	42,276.00
Lot 18: Facility 18	42,276.00
Lot 19: Facility 19	42,276.00
Lot 20: Facility 20	42,276.00
Lot 21: Facility 21	42,276.00
Lot 22: Facility 22	42,276.00
Lot 23: Facility 23	42,276.00
Lot 24: Facility 24	42,276.00
Lot 25: Facility 25	42,276.00
Lot 26: Facility 26	42,276.00
Lot 27: Facility 27	42,276.00
Lot 28: Facility 28	42,276.00
Lot 29: Facility 29	42,276.00
Lot 30: Facility 30	42,276.00
Lot 31: Facility 31	42,276.00
Lot 32: Facility 32	42,276.00
Lot 33: Facility 33	42,276.00
Lot 34: Facility 34	42,276.00
Lot 35: Facility 35	42,276.00
Lot 36: Facility 36	42,276.00
Lot 37: Facility 37	42,276.00
Lot 38: Facility 38	42,276.00
Lot 39: Facility 39	42,276.00
Lot 40: Facility 40	42,276.00
Lot 41: facility 41	42,276.00
Lot 42: facility 42	42,276.00
Lot 43: facility 43	42,276.00
Lot 44: facility 44	42,276.00
Lot 45: facility 45	42,276.00
Lot 46: facility 46	42,276.00
Lot 47: facility 47	42,276.00
Lot 48: facility 48	42,276.00
Lot 49: facility 49	42,276.00
Lot 50: facility 50	42,276.00
Lot 51: Facility 51	42,276.00
Lot 52: Facility 52	42,276.00
Lot 53: Facility 53	42,276.00
Lot 54: Facility 54	42,276.00
Lot 55: Facility 55	42,276.00
Lot 56: Facility 56	42,276.00
Lot 57: Facility 57	42,276.00
Lot 58: Facility 58	42,276.00

Lot 59: Facility 59	42,276.00
Lot 60: Facility 60	42,276.00
Lot 61: Facility 61	42,276.00
Lot 62: Facility 62	42,276.00
Lot 63: Facility 63	42,276.00
Lot 64: Facility 64	42,276.00
Lot 65: Facility 65	42,276.00
Lot 66: Facility 66	42,276.00
Lot 67: Facility 67	42,276.00
Lot 68: Facility 68	42,276.00
Lot 69: Facility 69	42,276.00
Lot 70: Facility 70	42,276.00
Lot 71: Facility 71	42,276.00
Lot 72: Facility 72	42,276.00
Lot 73: Facility 73	42,276.00
Lot 74: Facility 74	42,276.00
Lot 75: Facility 75	42,276.00
Lot 76: Facility 76	42,276.00
Lot 77: Facility 77	42,276.00
Lot 78: Facility 78	42,276.00
Lot 79: Facility 79	42,276.00
Lot 80: Facility 80	42,276.00
Lot 81: Facility 81	42,276.00
Lot 82: Facility 82	42,276.00
Lot 83: Facility 83	42,276.00
Lot 84: Facility 84	42,276.00
Lot 85: Facility 85	42,276.00
Lot 86: Facility 86	42,276.00
Lot 87: Facility 87	42,276.00
Lot 88: Facility 88	42,276.00
Lot 89: Facility 89	42,276.00
Lot 90: Facility 90	42,276.00
Lot 91: Facility 91	42,276.00
Lot 92: Facility 92	42,276.00
Lot 93: Facility 93	42,276.00
Lot 94: Facility 94	42,276.00
Lot 95: Facility 95	42,276.00
Lot 96: Facility 96	42,276.00
Lot 97: Facility 97	42,276.00
Lot 98: Facility 98	42,276.00
Lot 99: Facility 99	42,276.00
Lot 100: Facility 100	42,276.00
Lot 101: Facility 101	42,276.00
Lot 102: Facility 102	42,276.00
Lot 103: Facility 103	42,276.00
Lot 104: Facility 104	42,276.00
Lot 105: Facility 105	42,276.00

	Lot 106: Facility 106	42,276.00				
	Lot 107: Facility 107	42,276.00				
	Lot 108: Facility 108	42,276.00				
	Lot 109: Facility 109	42,276.00				
	Lot 110: Facility 110	42,276.00				
	Lot 111: Facility 111	42,276.00				
	Lot 112: Facility 112	42,276.00				
	Lot 113: Facility 113	42,276.00				
	Lot 114: Facility 114	42,276.00				
	Lot 115: Facility 115	42,276.00				
	Lot 116: Facility 116	42,276.00				
	Lot 117: Facility 117	42,276.00				
	Lot 118: Facility 118	42,276.00				
	Lot 119: Facility 119	42,276.00				
	Lot 120: Facility 120	42,276.00				
	Lot 121: Facility 121	42,276.00				
	Lot 122: Facility 122	42,276.00				
	Lot 123: Facility 123	42,328.00				
CW-62 to CW-87	Construction/ Rehabilitation of 26 FMS (Hill) in various districts	8,300,000.00	OCB	Post (Sampling)	1S2E	Non-Consulting Services: No  Advertising Type: National  No. Of Contracts: 26  Prequalification of Bidders: No  Domestic Preference Applicable: No  Bidding Document: Small Works  e-GP: Yes  Covid-19 Response? No  Comments: Responsibility: Respective WRIDD/SDs
	Lot 1: CW 62	319,231.00				
	Lot 2: CW 63	319,231.00				
	Lot 3: CW 64	319,231.00				
	Lot 4: CW 65	319,231.00				
	Lot 5: CW 66	319,231.00				
	Lot 6: CW 67	319,231.00				

	Lot 7: CW 68	319,231.00				
	Lot 8: CW 69	319,231.00				
	Lot 9: CW 70	319,231.00				
	Lot 10: CW 71	319,231.00				
	Lot 11: CW 71	319,231.00				
	Lot 12: CW 72	319,231.00				
	Lot 13: CW 73	319,231.00				
	Lot 14: CW 74	319,231.00				
	Lot 15: CW 75	319,231.00				
	Lot 16: CW 76	319,231.00				
	Lot 17: CW 77	319,231.00				
	Lot 18: CW 78	319,231.00				
	Lot 19: CW 79	319,231.00				
	Lot 20: CW 80	319,231.00				
	Lot 21: CW 81	319,231.00				
	Lot 22: CW 82	319,231.00				
	Lot 23: CW 83	319,231.00				
	Lot 24: CW 84	319,231.00				
	Lot 25: CW 85	319,231.00				
	Lot 26: CW 86	319,225.00				
CW-88 to CW-100	Construction/ Rehabilitation of 13 FMIS (Terai) in various districts	12,700,000.00	OCB	Post (Sampling)	1S2E	Non-Consulting Services: No  Advertising Type: National  No. Of Contracts: 13  Prequalification of Bidders: No  Domestic Preference Applicable: No  Bidding Document: Small Works  e-GP: Yes  Covid-19 Response? No  Comments: Responsibility: Respective WRIDD/SDs
	Lot 1: CW 88	976,923.00				
	Lot 2: CW 89	976,923.00				
	Lot 3: CW 90	976,923.00				
	Lot 4: CW 91	976,923.00				
	Lot 5: CW 92	976,923.00				
	Lot 6: CW 93	976,923.00				
	Lot 7: CW 94	976,923.00				
	Lot 8: CW 95	976,923.00				
	Lot 9: CW 96	976,923.00				
	Lot 10: CW 97	976,923.00				

	Lot 11: CW 98	976,923.00				
	Lot 12: CW 99	976,923.00				
	Lot 13: CW 100	976,924.00				
EQ-4	Procurement of Agriculture Equipment under and upscaling	2,700,000.00	OCB	Prior	1S1E	<p>Non-Consulting Services: No</p> <p>Advertising Type: National</p> <p>No. Of Contracts: 35</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Bidding Document: Goods</p> <p>e-GP: Yes</p> <p>Covid-19 Response? No</p> <p>Comments: Responsibility: Respective PIU</p>
	Lot 1: Agriculture Equipment 1	77,142.00				
	Lot 2: Agriculture Equipment 2	77,142.00				
	Lot 3: Agriculture Equipment 3	77,142.00				
	Lot 4: Agriculture Equipment 4	77,142.00				
	Lot 5: Agriculture Equipment 5	77,142.00				
	Lot 6: Agriculture Equipment 6	77,142.00				
	Lot 7: Agriculture Equipment 7	77,142.00				
	Lot 8: Agriculture Equipment 8	77,142.00				
	Lot 9: Agriculture Equipment 9	77,142.00				
	Lot 10: Agriculture Equipment 10	77,142.00				
	Lot 11: Agriculture Equipment 11	77,142.00				
	Lot 12: Agriculture Equipment 12	77,142.00				
	Lot 13: Agriculture Equipment 13	77,142.00				
	Lot 14: Agriculture Equipment 14	77,142.00				
	Lot 15: Agriculture Equipment 15	77,142.00				
	Lot 16: Agriculture Equipment 16	77,142.00				
	Lot 17: Agriculture Equipment 17	77,142.00				
	Lot 18: Agriculture Equipment 18	77,142.00				
	Lot 19: Agriculture Equipment 19	77,142.00				
	Lot 20: Agriculture Equipment 20	77,142.00				

Lot 21: Agriculture Equipment 21	77,142.00			
Lot 22: Agriculture Equipment 22	77,142.00			
Lot 23: Agriculture Equipment 23	77,142.00			
Lot 24: Agriculture Equipment 24	77,142.00			
Lot 25: Agriculture Equipment 25	77,142.00			
Lot 26: Agriculture Equipment 26	77,142.00			
Lot 27: Agriculture Equipment 27	77,142.00			
Lot 28: Agriculture Equipment 28	77,142.00			
Lot 29: Agriculture Equipment 29	77,142.00			
Lot 30: Agriculture Equipment 30	77,142.00			
Lot 31: Agriculture Equipment 31	77,142.00			
Lot 32: Agriculture Equipment 32	77,142.00			
Lot 33: Agriculture Equipment 33	77,142.00			
Lot 34: Agriculture Equipment 34	77,142.00			
Lot 35: Agriculture Equipment 35	77,172.00			

<b>Consulting Services</b>						
<b>Package Number</b>	<b>General Description</b>	<b>Estimated Value (in US\$)</b>	<b>Selection Method</b>	<b>Review</b>	<b>Type of Proposal</b>	<b>Comments</b>
CS-06	Individual National Consultants as and when required	100,000.00	ICS	Prior		Non-Consulting Services: No  Type: Individual  Advertising: National  Expertise: TBD  e-GP: No  Covid-19 Response? No  Comments: 7 contracts, responsibility: CPMO

## APPENDIX 9: CONSULTANTS TERMS OF REFERENCE

### 9-I TERMS OF REFERENCE FOR PIMS CONSULTING TEAM (FIRM)

#### A. Introduction

1. The project will be implemented over a period of 72 months, indicatively November 2024 to October 2030. The detailed implementation plan for the project is in the project administration manual (PAM). The consultant firm will be expected to prepare its personnel schedule and workplan in accordance with the project implementation plan.
2. The project implementation and management support (PIMS) consulting services consist of the following of 594 person-months of national consultants and 242 person-months of non-key experts.
3. The project scope and management arrangements are outlined in the PAM which sets out the roles and responsibilities of all government agencies and staff in project implementation and oversight.

#### 1. Project Description

4. The project will (i) improve productivity, profitability, and climate resilience of 113 farmer managed irrigation systems (FMIS) across five provinces, and (ii) institutionalize irrigation modernization and integrated crop water management (ICWM).<sup>1</sup> The project will help improving incomes of approximately 56,000 families. The project will (i) modernize 32,000 hectares (ha) of surface water irrigation systems; (ii) pilot innovative hill lift irrigation systems to irrigate 1,400 ha of dry uplands (Tar); (iii) strengthen capacity of farmers and the government institutions in ICWM; and (iv) introduce climate smart agriculture and support in agriculture value chain services for increasing productivity and profitability through mechanization and commercialization of agriculture. The project will enable farmers to be self-sufficient in the operation and maintenance of their systems.
5. The project is aligned with (i) Nepal's National Water Plan 2002–2027 which aims at increasing water use efficiency to provide year-round irrigation through modernization of FMIS;<sup>2</sup> (ii) Agriculture Development Strategy 2015–2035 which promotes acceleration of agricultural intensification and diversification into high-value crops to achieve Nepal's over-arching goal of economic growth and poverty reduction;<sup>3</sup> and (iii) National Water Resources Policy 2021 which promotes round the year irrigation, lift water to irrigate uplands, and institutional strengthening of concerned stakeholders.<sup>4</sup> The project will also support the implementation of the Second Nationally Determined Contribution to climate change particularly to increase access to climate-smart agriculture technologies to smallholder farmers and marginalized groups.<sup>5</sup> The project aims

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<sup>1</sup> These Provinces include Bagamati, Gandaki, Koshi, Lumbini, and Madhesh provinces.

<sup>2</sup> Government of Nepal, Water and Energy Commission Secretariat. 2005. [National Water Plan, 2002–2027](#). Kathmandu.

<sup>3</sup> Government of Nepal, Ministry of Agricultural Development. 2015. [Agriculture Development Strategy, 2015–2035](#). Kathmandu.

<sup>4</sup> Government of Nepal, Ministry of Energy, Water Resources and Irrigation. 2021. National Water Resource Policy. Nepal

<sup>5</sup> Government of Nepal, Ministry of Forests and Environment. 2021. [Vulnerability and Risk Assessment and Identifying Adaptation Options. Summary for Policy Makers](#). Kathmandu. Government of Nepal. 2020. [Second Nationally Determines Contribution](#). Kathmandu

at reducing rural poverty through: (i) empowering women farmers, (ii) ensuring water security and building climate resilience, and (iii) increasing food security and reduce rural poverty.<sup>6</sup> It is aligned with the Asian Development Bank (ADB) country partnership strategy for Nepal, 2020–2024,<sup>7</sup> ADB's Water Sector Directional Guide that aims for poverty reduction, gender equality, climate resilience, food security, and capacity building,<sup>8</sup> and ADB's increased focus on climate investments, and with operational priorities of ADB's Strategy 2030.<sup>9</sup> To meet the project objectives the project will have three outputs as summarized below.

**6. Output 1: Irrigation infrastructure modernized:** This output will modernize approximately 100 FMISs covering a command area of 17,452 ha and the Rajapur Irrigation Project (RIP) covering a command area of 14,500 ha to improve performance and increase resilience to climate change.<sup>10</sup> Across the FMIS and RIP, the project will (i) construct and/or rehabilitate permanent gated intake structures and protect around 1.5 kilometers of riverbanks and hill slopes to reduce flood and sediment ingress in the system, improve irrigation system efficiency and stability, and support on-farm irrigation and equitable management of irrigation water—this is through targeted selective irrigation canal lining, improved gated control structures, improvement of cross drainage, and piloting groundwater irrigation for conjunctive use; (ii) construct 12 new pilot hill lift irrigation systems irrigating 1,354 ha by pumping riverside subsurface water to high dry land (*tar*) and distribution of water by using modern pipe and micro irrigation systems with volumetric regulators for high water use efficiency. The details of the activities under this Output will include:

- (i) Rehabilitation and upgrading of 32,000ha of surface water irrigation including; (i) 66 hill irrigation schemes (5,889ha), 34 terai irrigation schemes (11,563ha) in Koshi, Madhesh and Bagamati provinces; (iii) upgrading for modernization of key infrastructure of the Rajapur Irrigation Project (RIP 14,500ha) in Lumbini Province. In addition, the project will construct 12 new pilot hill lift schemes (1,354ha) with modern lifting and high efficiency piped irrigation in the mid hill areas of Gandaki and Lumbini Provinces.
- (ii) Improved on-farm irrigation will be supported at all the FMIS subprojects and Rajapur. Advanced on-farm irrigation including piped, micro irrigation and polyhouses will be supported at the hill lift sub projects.
- (iii) Pilot community conjunctive groundwater program at three selected terai FMIS locations focusing on the electrification of farmers and other tubewells.

**7. Output 2: Irrigation and Agriculture Agencies and Farmer Organizations Strengthened.** The output will strengthen the management and institutional framework to ensure the project investments meet their targets of irrigation infrastructure modernization, improved water use efficiency, increased productivity, and sustainability. The program will implement an Integrated Crop Water Management (ICWM) approach incorporating climate change; sustainable operation and maintenance (O&M) of the irrigation infrastructure reaching the farm level, crop planning based on farm size and availability of water, empowered farmer organizations, supports

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<sup>6</sup> Nepal has built an enabling legal and regulatory framework to spur climate action and its climate change commitments are embedded in a Green, Resilient and Inclusive Development (GRID) approach. The government issued the Kathmandu Declaration for the GRID Partnership in 2021.

<sup>7</sup> ADB. 2019. [Country Partnership Strategy, Nepal, 2020–2024—Promoting Connectivity, Devolved Services, and Resilience](#). Manila.

<sup>8</sup> ADB. 2019. [Strategy 2030](#). Manila and ADB. 2022. [Strategy 2030 Water Sector Directional Guide](#). Manila

<sup>9</sup> The project is aligned with the following operational priorities: (i) Addressing remaining poverty and reducing inequalities; (ii) Accelerating progress in gender equality; (iii) Tackling climate change and building climate and disaster resilience and enhancing environmental sustainability; (iv) Promoting rural development and food security; and (v) Strengthening governance and institutional capacity. ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

the farmers towards establishing agri-enterprises, support in market chain and access to finance. The output will strengthen the capacity of the farmers and the government agencies at federal, provincial and local levels in integrating irrigation management and agriculture development for FMIS. At the farm level, the project will; (i) strengthen capacity of farmers, water users association (WUA) to better operate and maintain irrigation systems;<sup>10</sup> and (ii) upgrade WUA to water users cooperatives (WUC) in piloting irrigation systems to improve integrated irrigation management and agribusiness functions designed to maximize the opportunities of irrigation investments. The Project will facilitate WUCs in accessing government subsidies provided time to time, rural finance, support for the market chain, facilitate agro-enterprises, and network with private agri-enterprises.<sup>11</sup> The Project will also facilitate WUA/WUC in operating the hill lift irrigation schemes as water utilities introducing metered charging systems and fee collection to help meet full cost recovery for operating costs. The output will update existing ICWM guidelines including design, management and extension support, climate change risks, and develop a road map for the long-term strategy for investment and management of the FMIS schemes in Nepal. The guidelines and parallel training modules will be used to strengthen the capacity of irrigation and agriculture extension workers across Nepal.

- (i) Training and strengthening of the devolved institutions with focus on the WRIDDs, AKCs and the irrigation and agriculture units at the local level.
- (ii) Strengthening of field level management including (a) strengthening of Water User Associations (WUA); and (b) explore for establishment of parallel new Water User Cooperatives (WUCs) who could enhance support in irrigation management operations and agribusiness functions. The WUCs will be initially piloted in 20 subprojects (12 hill lift, 3 terai FMIS, 2 hill FMS and 3 Rajapur). Subject to the results of the pilots and farmer interest the WUC program would be upscaled to other sub-projects. The farmers will work with the WRIDDs who will support them in the initial establishment and registration of the WUCs through the cooperative units at the local level. Irrigation management functions will be supported by the WRIDDs/hill lift offices, and agribusiness functions supported by the AKCs. The board of directors of the WUCs will initially incorporate the key representatives of the WUA.
- (iii) Enhanced Access to Rural Finance: The project will review current policy and programs for finance and subsidies for irrigation and agriculture. Based on the review the project will work with selected local administrations, lending agencies, private sector, WUA and WUC to train them in new and workable models to improve access and better target financial support for farmers to invest farm enterprises, on-farm irrigation, upgrading of irrigation. The program will also address alternative ways to meet financing costs for maintenance and repairs beyond the capacities of the farmers themselves.

**8. Output 3: Modern agriculture and value chain facilities introduced:** The project will address core weaknesses in agriculture development including limited uptake of modern agriculture technologies, lack of mechanization, and agriculture facilities. The project will explore upstream and downstream opportunities to promote value addition including demonstration and training in: (i) adopting climate-smart agricultural practices to improve crop yield, quality and production; (ii) adopting advanced agricultural technologies including modern farm machineries and equipment to enhance efficiency, productivity, and address labor shortages; (iii) value addition through agriculture facilities including collection and processing, storage, and buying and

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<sup>10</sup> The WUAs will remain as core organization for irrigation system, operation and management in all subprojects,

<sup>11</sup> About twenty WUCs will initially establish at pilot level in 12 hill lift, 3 terai FMIS, 2 hill FMIS and 3 in RIP. Subject to the results of the pilots and farmer interest, the WUC program could be upscaled to other sub-projects.

selling of inputs and outputs. The Project will establish digital advisory services which through digital apps and mobile phones will provide information on weather, marketing and agriculture advisory services to improve farmers' operational efficiency and decision-making for climate resilient farming and marketing. The project will facilitate accessing financing to selected WUAs/WUCs. They will be selected based on viable and sustainable business models and demonstrate high interest to invest in modern agriculture machineries and agriculture facilities.<sup>12</sup> The project will help WUA/WUC in obtaining agriculture machinery and WUA facility through partial financing following the working directives of Department of Agriculture (federal DOA). The program will include:

- (i) Development of agricultural technologies and enterprise development focusing on the interventions that will make the most impact to the needs of farmers in the sub-project areas and will include planning and management of cropping patterns using farmer field school approach, training and demonstrations including seed multiplications, green manuring, zero tillage, nature-based protection, alternate wet and dry irrigation, and consolidated farming amongst others. The training will identify potential business opportunities and promote establishment of agriculture enterprises.
- (ii) Demonstrations of: (a) agriculture equipment and machinery to support mechanization to reduce reliance on scarce agricultural labor. (b) agriculture facilities to improve the marketing and processing including agriculture collection centers, grain storage, WUC storage facilities and polyhouses. The project will procure equipment to be used in the demonstrations which will be assigned to the WUAs/WUCs for future rental to farmers once the demonstrations are completed.
- (iii) Upscaling: Following on from the demonstrations the project will provide financial support for selected WUAs/WUCs to invest in modern agriculture machinery, polyhouses and agriculture facilities. Support will be provided to WUA/WUCs to construct or rehabilitate WUA/WUC facilities for crop storage and agro-processing etc. The aim will be to support selected investments that can demonstrate a viable and sustainable management and business model, be self-financing and can show significant impact to the viability of the subproject. The project will procure and assign equipment and facilities to the relevant WUA/WUC who will contribute 50% of the costs for machinery (based on selection criteria) and 15% for the WUA/WUC facilities.
- (iv) Establishment of communications through digital advisory services to provide cost effective access to information to the dispersed and remote irrigation areas and stakeholders. The program will include targeted weather, climate change, marketing, and agricultural advisory services. The system will build on existing social media systems and include videos, SMS, and apps and with emphasis on user experience focusing on how to meet the needs of different demographic groups of farmers; government officers, private sector and small scale entrepreneurs.

## **2. Project Implementation**

9. The project will be implemented in compliance with the Nepal's federal system and the project's implementation arrangements will be: (i) a central project management office (CPMO) in DWRI under the Ministry of Energy, Water resources and Irrigation (MOEWRI) will be responsible for overall project management including technical support to its Rajapur irrigation management office (RIMO) and the project implementation units (PIUs) in each of the Water Resources and

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<sup>12</sup> The facilitation will be limited to support WUA/WUC in preparing proposal for seeking loan from financial institutions.

Irrigation Development Divisions (WRIDD) of the provinces. CPMO will facilitate civil works procurement undertaken by DWRI, Hill lift implementation offices and RIMO, monitor project implementation, collect expenditure data from WRIDDs, Central Agriculture Management Office (CAMO), Hill lift implementation offices and RIMO and prepare withdrawal applications and progress reports; (ii) the AKCs under the DOAD of Provinces will implement agriculture development plan (ADP) in FMIS and HL and DOA of Federal government will establish implementation unit in Rajapur (Rajapur Agriculture Management Office, RAMO) to implement ADP in Rajapur Irrigation System, and AKC and RAMO support farmers and local government in climate resilient and modernized agriculture. A Central Agriculture Management Office (CAMO) under the federal Department of Agriculture will be responsible to coordinate with the AKCs and RAMO, provide capacity building support on ADP implementation and climate smart agriculture, collect project benefit monitoring data, collect statement of expenditures, prepare consolidated report of ADP progress, develop knowledge products and forward to CPMO. The implementation arrangement adheres to the principles of federalization with basic responsibility and accountability for selecting, preparing, procuring, and implementing work by the provinces, while technical backstopping and management support will be provided by the federal offices. Project management consultants will support the CPMO, CAMO and PIUs. A project steering committee will be formed chaired by the Secretary, MoEWRI, and members from the relevant federal and provincial ministries to provide policy guidance support to the project.

## **B. Terms of Reference for the PIMS Consulting Team (Firm)**

### **1. Objectives of the Consultancy Services**

10. The consulting firm will provide support services over a six-year period or till the project completion time, whichever is earlier, to the Central Project Management Unit (CPMO), Central Agriculture Management Office (CAMO), (Agriculture Office for Rajapur Irrigation System) RAMO, the Provincial Implementation Units (PIUs)- WRIDDs, AKCs (Province Level Agriculture Implementation Office), Federal Hill Lift offices of Gorkha and Butwal, and local government agencies to ensure that all the project activities and outputs are performed according to the project plans and the compliance of the loan agreements and covenants.

### **Scope of Services**

11. The scope of the consultancy services will include, but not necessarily limited to, the following four main services.

#### ***Strengthened Project Management***

- Support overall project implementation following agreed procedures and arrangements, and propose further improvements as required.
- Ensure timely delivery of project outputs with close collaboration with the project administration at different levels as well as the relevant line agencies.
- Support/ensure timely preparation and review of withdrawal applications, obtain project account statements.
- Support the project's procurement requirements including civil works contracts, vehicles and equipment, and procurement of equipment for demonstrations.

#### ***Rehabilitation and Construction of Irrigation Systems***

12. Prepare and support the activities under Output 1 including
- Rehabilitation and upgrading of 100 plus FMIS schemes covering about 18,000

ha consisting of minimum 66 hill and 34 terai FMIS schemes. Of the 100 schemes 61 schemes have been designed and 39 plus remain to be designed. Designs will be prepared by the WRIDD offices and the consultant will be required to review the design and ensure quality control during implementation. The Construction of the sub-projects shall be through the WRIDD/ Hill lift offices and the consultant is required for construction supervision, quality control and support for procurement and contract management including works assigned to WUA.

- Twelve new pilot hill lift schemes covering 1,354 ha will be constructed which abstract water from the river beds and pump up to the required static head to irrigate the command area. The consultant will review the existing designs, and recommend for new approaches and design wherever necessary for the hill lift schemes which includes intake design, pumps and electrification, reservoir, piped delivery and distribution systems. Intake design involves abstraction from the gravel river beds and will involve design of appropriate tubewell, gallery or sump well abstraction systems. The consultant will provide intensive construction support to the pilot hill lift offices to ensure quality control and testing of the groundwater intakes, reservoirs, pumps, delivery and distribution systems. In addition, the consultant is responsible to support for the procurement and contract management of hill lift sub-projects.
- The project will incorporate rehabilitation and upgrading of key components of Rajapur Irrigation project covering 14,500ha. The task includes design, construction supervision, quality control and support to procurement and contract management. The scope of the rehabilitation work includes i) upgrading of the Budhi Kulo approach channel-preliminary designs have been prepared but the consultant is required to complete the surveys and review and adjust the designs as required; ii) upgrading of the Budhi Kulo Intake (designs completed); iii) Karnali river bank protection (designs completed); iv) main canal structures (designs completed); v) design works of the remaining branch canal structures (about 3/4<sup>th</sup> of the total structures)has to be prepared by the consultant.vi) rehabilitation of the Geruwa Khola intakes (designs completed) vii) study of possibilities of feeding water through Budi Kulo (preferably Gola branch canal) to Geruwa intake systems); and viii) procurement of excavators to support O&M (specifications to be prepared).
- Provide support for the program of on-farm irrigation. This will include preparation and support for the program of on-farm water management which will be implemented in all the FMIS schemes and Rajapur. In addition, the consultant will prepare the pilot programs of modern on-farm irrigation which will include pressurized irrigation (drip/sprinkler) to be demonstrated at selected hill lift sub-projects and pilot community conjunctive groundwater, selected terai FMIS locations with management through the WUA and WUC.
- The consultant has to prepare the '*Design Manual for Hill Lift Irrigation Schemes*' and get feedback from DWRI and correct it accordingly before its approval from the authority. The Design Manual shall include the selections of water acquisition, lifting arrangement with suitability of pump selection, delivery pipes, storage tanks, distribution system and other necessary structures including required information for the completeness of design manual. The consultant shall provide suitable templates of design, social and environmental checklist, appropriate options of cropping calendar, crop budget, economic analysis etc.

### ***Support for the Institutional Development Plan***

13. To provide key support for implementation of the Institutional Development plan under Output 2 including;

- Plan, implement and act as a resource person for the training to be conducted by PIMS, CPMO, CAMO and support the program of training and strengthening to the project and institutions with focus on the WRIDDs, AKCs at the local level.
- Design and support the planning and implementation of the program to strengthen field level management which will include
- strengthening of Water User Associations (WUA); and
- establishment of parallel new Water User Cooperatives (WUCs) who will support irrigation management operations and agribusiness functions.
- About 20 WUCs will be initially piloted in FMIS, RIP and the hill lift schemes (pilot hill lift 12 schemes, hill FMIS 2 scheme, Terai 3 schemes and 3 in RIP). The consultant shall prepare a standard WUC by-laws and provide step by step procedure guideline of establishing WUC linking with WUA.
- Support establishment and development of communications through digital advisory services.
- Support the program to improve access to rural finance through a review of ongoing credit and finance programs and piloting in selected sub-projects with improved procedures to access rural finance through partial investment subsidies.

### ***Support for the Agricultural Development Plan***

- To provide support for the implementation of the Agricultural Development Plan under output 3 including;
- Organize/Support the program of training and demonstrations in Agricultural Technologies and Enterprise Development including seed multiplications, green manuring, zero/minimum tillage, nature-based protection and consolidated farming amongst others. The training will identify business opportunities and promote the establishment of agriculture enterprises.
- Provide support for demonstrations of agriculture equipment and machinery to support mechanization to reduce reliance on scarce agricultural labor.
- Provide support for training and demonstrations of agriculture facilities to improve the marketing and processing including agriculture collection centers, grain storage, storage facilities and polyhouses.
- Support the project to procure equipment to be used in the demonstrations which will be assigned to the WUCs/WUAs for future rental to farmers once the demonstrations are completed.
- Support the program of upscaling of the demonstration that will be through Partial Investment Subsidies.

### **Reporting**

14. The consultants shall prepare and submit the following reports to the CPMO at the times specified below:

- **Inception Report:** to be submitted 6 weeks after the commencement of their services. The report shall describe the consultants' overall understanding of the project implementation procedures and arrangements and detailed plan to effectively deliver the required consulting services.
- **Quarterly Progress Reports:** The reports shall briefly describe and include the project activities undertaken during the report period, disbursement and contract

status, financial situation, progress of implementation of physical infrastructures, any changes in the implementation schedule, problems and constraints associated with project implementation and suggested remedial measures, planned activities and expenditure forecast for the next three-month period. The fourth quarterly progress report will be an annual report covering the entire one-year period.

- **The Mid-term Review Report:** The consultants shall prepare and submit a Mid-term Review Report at the end of 36 (or as appropriate) months of project implementation period. The report will update the overall progress of implementation of various project components and will include the description of problems encountered in achieving the objectives, remedial measures adopted to address the problems, financial status of the Project, and suggestions for improvement of procedures/guidelines. The Mid-term Review Report should provide a clear picture of the project status, which will guide the ADB and GON to take corrective and appropriate steps for achieving the desired objectives of the Project in the remaining project period.
- **Project Completion Report (PCR):** At the end of project period, the consultants shall prepare a Project Completion Report (PCR). The PCR will summarize, or accumulate as appropriate, the records of the four-monthly and annual reports. In addition, the PCR will analyze the constraints met in project implementation, measures adopted to resolve such constraints, document the achievements made by the Project, and suggest ways to improve implementation of such projects in the future. In short, the PCR will provide a brief but a complete picture of issues involved in project implementation.

15. The summary of deliverables in aligned with the report shall be as follows:

S. No.	Report	Expected output	Timeline	Remarks
1	Inception Report	Demonstrating consulting firm's understanding of ToR and ensuring plan of action and timeline for various activities	Within 6 weeks after issuance of notice to proceed this assignment	3 hard copies and electronic copy
2	Monthly progress Report	Covering the summary of the activities performed and mobilization during the month, problems encountered, solutions proposed/ adopted, corrective actions if required and the activities planned for the coming months	Within 7 <sup>th</sup> day of the following calendar month	3 hard copy and electronic copy
3	Quarterly progress Report	Covering the summary of the activities performed and mobilization and disbursement during the quarter problems encountered, solutions proposed/adopted, corrective actions if required and the activities planned and disbursement projected for the coming quarter	Within 10 <sup>th</sup> day of the following quarter	3 hard copies and electronic copy
4	Annual Progress Report	Covering the summary of the activities performed, disbursement achieved and mobilization status during the year problems encountered, solutions proposed/adopted, corrective actions if required and the activities planned and disbursement projected for the coming year	Every year within 15 <sup>th</sup> day of commencement of next year.	3 hard copies and electronic copy

S. No.	Report	Expected output	Timeline	Remarks
5	Safeguard (Environmental, social and resettlement )	As per ADB's requirement	Starting from 3 months from the date of issuance of NTP	3 hard copies and electronic copy
6	Procedure guideline of establishing WUC in irrigation schemes	Guideline is prepared	Within 12 months after commencing of assignment	3 hard copies and electronic copy
7	- Design manual of FMIS irrigation system including hill lift irrigation projects - Updating of ICWM guidelines	Guideline for designing FMIS and hill lift project is prepared as per the requirement stated in scope of services	24 months after commencing of assignment	3 hard copies and electronic copy
8	FMIS Sector Strategy and Roadmap	Roadmap for FMIS sector development making the systems robust, resilient and self-sustaining.	36 months after commencing assignment	3 hard copies and electronic copy
9	Mid-term review report	Covering the summary of the activities performed, disbursement achieved and mobilization status during the elapsed time of the project problems encountered, solutions proposed/adopted, corrective actions if required and the activities planned and disbursement projected for the coming period	36 (or 1 month before the MTR mission as appropriate) months after commencing of assignment	3 hard copies and electronic copy
10	Draft Project Completion Report (PCR)	In ADB format covering (i) a concise description and assessment of the project from identification to completion , (ii) evaluating the adequacy of preparation, design, implementation arrangement, and performance of the IAs and ADB, including how problems were handled, whether they were foreseen as potential risk and the adequacy of the solutions adopted during the implementation, (iii) a preliminary evaluation of initial operation, and achievement and sustainability of the benefits, (iv) a preliminary evaluation of the extent of the achievement of the outcome of the project and the project contribution to achieving the expected impact, (v) suggest follow up actions, required during the project operations and, (vi) make recommendation based on the evaluation and lessons for future implementation and operations, as well as improvements in related ADB procedures.	Within 30 days of completion of consulting services assignment	3 hard copies and electronic copy
10	Final PCR Completion Report	Incorporating the comments of CPMO, CAMO, ADB and other stakeholders	Within 30 days of issuance of the client's comments.	3 hard copies and electronic copy
11	Any other reports as needed and requested by the Client and as defined in scope of ToR		As and when required	

16. Prior approval from Project Director of CPMO is mandatory for mobilization and

demobilization of all key and non-key experts.

### Inputs to be provided by the Employer

17. The Employer will provide the following inputs:
- (i) Office space in CPMO, CAMO, Provincial Offices, RIMO and HLIP (Gorkha).
  - (ii) The relevant and available reports, studies and design.
  - (iii) Office facilities, such as computers, printers, photocopiers, UPS, telephone, fax with consumables shall be covered from the PS.
  - (iv) Cost of activities covered on the PS shall be spent only on the CPMO prior approval.
  - (v) Hiring charge of Vehicle/ Motorbike
    - The consultant has to manage the 4 WD (manufactured date not before 2020 A.D. & not less than 2000 cc) vehicles as required for uninterrupted field movement. Each of the three provincial office, Hill Lift office, Rajapur office will be equipped with at least one vehicle and central office shall be equipped with at least two vehicles (total 7 nos). The vehicles shall be at the allotment of each unit office for at least 8 months per year. The cost of hiring vehicles shall cover all the expenses of driver, running cost and maintenance throughout the contract period.
    - Similarly, the consultant has to manage 15 Nos. of motorbike (not less than 150cc) for at least 8 months per year. The allocation of the motorbike shall be decided by CPMO during the implementation. The cost of hiring motorcycles shall cover all the running cost and maintenance throughout the contract period
  - (vi) The consulting firms shall price all cost, direct and indirect that consulting firm envisages to incurred for the performance of its services (except those stated above) in its financial proposal. No additional payments shall be made for such expenses.

### Payments

18. For the invoicing of staff members, payments will be made on a monthly basis after submission of timesheets and monthly report. Provisional sum will be paid based on submission of invoices.

### III TERMS OF REFERENCE OF CONSULTANT TEAM

19. A national consulting firm(s) will provide the consulting services. It is estimated that 594 person-months of key expert's services will be required in national consultants, as well as 242 person-months of non-key experts. The expertise of the consultants and the expected input periods of each are summarized in Table 1 and described below.

**Table 1: Summary of the Consulting Inputs (p-m)**

Consulting Services	Key Terms of Reference
CS01: Project Implementation Management Support (PIMS)	This will be the main package of consulting services procurement. The consultants will (i) Strengthen and facilitate project management and implementation, and (ii) strengthen the institutional and operational capacity of the executing and implementing agencies, (iii) support in design, supervision and monitoring of rehabilitation and construction of Irrigation systems that include rehabilitation of 100 plus FMIS, 12 plus hill lift irrigation system and rehabilitation and upgrading of Rajapur Irrigation Project, (iv) Support for Institutional Development Plan, and (v) Support for Agricultural Development Plan. The PIMS will provide management support to all the three project outputs and will work closely with the national and international specialist

	consultants, recruited as individual consultants.	
		<b>Key Experts</b>
	<b>Central Level CPMO</b>	
1	Irrigation Specialist (Team Leader)	24.0
2	Senior Irrigation Design Engineer/DTL	56.0
3	Agriculture Specialist	28.0
4	Hydrologist	6.0
5	Mechanical Engineer (Gates and pumps)	6.0
6	Procurement and Contract Management Specialist	8.0
7	Digital Communications Consultant	12.0
8	Social Development Specialist	12.0
9	Environment Safeguards Specialist	12.0
10	Financial Management Specialist	10.0
	<b>Sub Total</b>	<b>174.0</b>
	<b>Hill Lift Offices</b>	
1	Hill Lift Irrigation Design/Quality Control Engineer	35.0
2	Agriculture & Institution Management Specialist	32.0
3	Social Development Specialist	15.0
	<b>Sub Total Hill Lift</b>	<b>82.0</b>
	<b>Rajapur Irrigation Management Office</b>	
1	Irrigation Planning and Design/Quality Control Engineer	35.0
2	Agriculture & Institution Management Specialist	30.0
3	Social Development Specialist	12.0
	<b>Sub Total Rajapur</b>	<b>77.0</b>
	<b>Provincial Offices (Koshi, Madesh, Bagamati),</b>	
1	Irrigation/ Quality Control Engineer (3 positions)	120.0
2	Agriculture & Institution Management Specialist (3 positions)	90.0
3	Social Development Specialist (3 positions)	36.0
	<b>Sub Total 3 Provincial Offices</b>	<b>246.0</b>
	<b>Unallocated</b>	<b>15.0</b>
	<b>Total Key Experts</b>	<b>594.0</b>
	<b>Non-Key Experts</b>	
1	Associate Experts	222.0
2	Unallocated Non- Key Experts	20.0
	<b>Sub Total Non-Key Experts</b>	<b>242.0</b>
	<b>Overall Total</b>	<b>836.0</b>
CS02: Individual Consultants as and when required.	International Consultants	
	1 Irrigation Modernization Specialist	4.0
	2 Institution Specialist	4.0
	3 Digital Communications Specialist	3.0
	4 Finance and Credit Specialist	2.0
	Sub Total International	13.0
	National Consultants	
	1 Institutional and Cooperatives Specialist	8.0
	2 Rural Finance Specialist	6.0
	3 Independent Safeguards Consultant-Land Donation	0.5
3 Unallocated (as required)	17.50	
Sub Total National	32.0	

## A CPMO Office

### Position 1: Irrigation Specialist/Team Leader

20. The Irrigation Specialist/Team Leader will work closely with the Project Director and

his/her team will be responsible for overall management of the consulting team to achieve the project's outputs including providing the four main services described above. The specialist will have a master's degree in civil engineering/irrigation/water resource management or in related field, and will have 15 years of experience with 12 of those years leading the implementation of the irrigation projects. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills is essential. Responsibilities will include but not limited to the following.

21. Lead the PIMS consulting team, supervise and guide the individual specialists ensuring that consultant resources are effectively used and engaged in project activities to collectively deliver the required services and outputs;

- Support for the Plan, design and implementation of overall project management.
- Advise the Project Director and the Agriculture Project Manager. Coordinate all the project activities including implementation of the infrastructure, institution and agriculture development plans.
- Assist CPMO in maintaining, updating and effectively using the management information systems (MIS) established by the predecessor project to ensure monitoring and quality control of subproject implementation through sound reporting, recording, and advising mechanisms on all processes and activities.
- Assist the various project institutions at different levels to implement the agreed detailed subproject implementation systems, procedures, and arrangements, by monitoring and advising on the performance;
- Ensure technical quality of sub-project preparation and implementation including engineering aspects and the social agendas such as gender, ethnic minorities, disadvantage groups and other vulnerable people;
- Review and advise on individual subproject detailed design reports and recommend their approval by participating in the Project Appraisal Committee;
- Undertake and participate in training needs survey, and develop training programs and materials to be used in the project management training of the personnel in DWRI, DOA, Provincial Level, Local Government, WUAs and WUCs.
- Assist CPMO and CAMO in preparing annual training plan and implementing the programs to effectively meet the needs of the Project staff at all levels;
- Prepare project related contract awards and disbursements reports with projections;
- Working with the various consultants, review current training manuals/materials related to the development of modern on- farm water management and develop guidelines for on-farm water management, assist the project offices and provincial teams in delivery of on- farm water management activities including management, operation and maintenance, assist and coordinate on-farm water management activities with the agricultural component.
- Prepare inception, annual reports, detailed mid-term review report, and project completion reports, and other reports as required by CPMO.
- Finalize the *Design Manual for Hill Lift Irrigation Schemes* and submission for approval.
- Finalize the remaining design of Rajapur Irrigation system.
- Finalize procedure guidelines of WUCs formation in selected irrigation schemes prepared by agriculture specialist.
- Any other necessary works to meet the objective of the consulting service.

**Position 2: Sr. Irrigation Design Engineer/ Deputy Team Leader**

22. The Sr. Irrigation Design Engineer will support the outstanding irrigation design work including; design support as well as construction supervision works to be implemented by WRIDDs for the 100 plus FMIS systems and full responsibility for outstanding design work and construction supervision for the Rajapur irrigation sub-project and Hill Lift sub-project. The Engineer will have a master's degree in civil engineering/irrigation/water resource management or in related field, and will have 15 years of experience with 10 of those years leading the design, implementation and quality control of irrigation projects. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, working experience with computer-based design including AutoCAD is essential. The consultant's responsibilities will include but are not limited to the following.

- Works and exercise his role as PIMS representative in the absence of Team leader and or during the leave period of TL. DTL will also be responsible for the tasks assigned to TL.
- Review and finalize the designs of outstanding works for the Rajapur irrigation project as prepared by Rajapur Planning, design/quality control Engineer. Similarly, review design of remaining HLIP and FMIS.
- Monitor the procurement, contract management and construction stages of each sub-project. Assist in resolving contractual issue and dispute resolutions during implementation.
- Assist WRIDD/RIMO/HL engineers and sub-engineers in putting in place a system of effective supervision of construction work carried out by contractors and WUAs.
- Prepare detailed designs, specifications and BOQs for all the outstanding work at FMIS, HLIP and Rajapur.
- Review the DDR and provide support to the WRIDD offices to for batch 2 sub-projects (39 plus FMIS)
- Support the preparation of the design and specifications for the demonstrations of agricultural facilities under output 3.
- Review the overall planning and designs prepared for the 12 hill lift schemes. Also, to review the performance and lessons learnt from other recently constructed hill lift schemes in Nepal.
- Prepare detailed designs for the hill lift schemes including layouts, drawings, specifications and costed bill of quantities.
- Collect information as required in the DMF table and enter it in the MIS system.
- Prepare the designs working closely with the electrical engineer and hydrogeologist to support the planning and design of around 300 ha of pilot conjunctive groundwater including electrification of tubewells in Terai sub-projects.
- In consultation with farmers prepare the designs and specifications for demonstrations of modern-on farm irrigation at the hill lift sites.
- Prepare monthly and quaternary report and support TL in preparing other reports as required.
- Provide support for the O&M of the completed hill lift schemes as required.
- Support to provide training to the WUA, Sub-project Monitoring Committee (SMC), monitor their activities and follow up on any complaints received.
- Finalize design manual for hill lift irrigation in consultation with TL.
- Any other necessary works to meet the objective of the consulting service.

### **Position 3: Agriculture Specialist**

23. The Agriculture Specialist will work closely with the Project Director and the CPMO office as well as the Project Manager in the CAMO office. The specialist will have overall responsibility to support the implementation of the institutions and agriculture development programs. The

specialist will have a master's degree in agriculture or an equivalent related field, and will have 12 years of general experience and 8 years of project experience relating to agriculture. The consultant should preferably have experience in establishing and supporting cooperatives as well as program for agriculture support and credit. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills etc. The consultant's responsibilities will include but are not limited to the following.

- Lead the agriculture and institution programs by supervising and providing key support to the agriculture specialists in the province and sub-project offices.
- Maintain coordination and advise the Agriculture Project Manager in the CAMO office for effective implementation of agricultural activities.
- Establish the arrangements using MIS systems for monitoring and evaluation of the various agriculture institutions and agriculture programs.
- Work with the various consultants and line agencies to implement the program of training and institutional development of the devolved institutions including the irrigation and agriculture units at the provincial and local level.
- Lead the program of strengthening of the field level management including strengthening of the Water User Associations as well the piloting and upscaling of Water User Cooperatives,
- Prepare guideline of establishing WUC in irrigation schemes.
- Working closely with the digital communications specialist to support the program to establish digital advisory services and development of communications.
- Lead the implementation of the agricultural development plans; the specialist will work closely with the Agriculture Specialists in the province and sub-project offices as well as the AKCs including the program of agriculture training and demonstrations.
- Provide the lead support for the program of partial subsidies for farmers and small agricultural enterprises. The tasks will include design the detailed framework and establishing the mechanisms for approvals, allocation of funds and disbursement arrangements.
- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service

#### **Position 4: Hydrogeologist**

24. The hydrogeologist will be responsible for the design and supervision of the intakes for the hill lift irrigation systems as well as the pilot electrification of tubewells at Terai Schemes. The hydrogeologist will have a master's degree in geology/engineering geology /groundwater hydrology or equivalent in related field, and will have 12 years of general experience and 8 years specific experience in the planning and design of groundwater irrigation or water supply projects. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills. The consultant's responsibilities will include but are not limited to the following;

- Review progress and performance of the drilling and tubewell installation program at the sites. Using the results of exploratory drilling, prepare the detailed design of production tubewells to meet the design flows for each schemes including the number of tubewells, depths, diameters and lengths of screen and casing and specifications for the pumps.
- Where tubewells are not able to meet the design discharge requirements, work with design engineer to assess alternatives including sump well or galleries or any other innovative techniques and design the alternative proposed techniques.
- Support concerned PIUs in planning and design of the intakes including

- supervision and support tubewells drilling works.
- Support the planning and design of the pilot community groundwater programs in selected Terai schemes. Provide support to design cost effective farmer wells using electric pumps. Assess groundwater balance and design for safe yield.
- Provide support to the institutional development consultants in defining the role of WUC/WUAs for sustainable management and conjunctive use of surface and groundwater.
- Mobilize in other related field as required and advised by CPMO.
- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service

#### **Position 5: Mechanical Engineer (pumps and gates)**

25. The Mechanical Engineer will be responsible to support design and supervision of the installation of the intake gates at Rajapur IP and support in installation of pumps in the hill lift systems. The mechanical engineer will have a master's degree in mechanical engineering or related field, and will have 12 years of general experience and 8 years of specific experience in design of mechanical and electro-mechanical gate systems. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, AutoCAD is essential. Responsibilities will include but are not limited to the following.

- Review the detailed design and drawings of hydromechanical components (mechanical steel structures such as Gates, Stoplogs, Deflector, Trash racks, hoisting systems and accessories etc.);
- Supervise, monitor and assist in overall technical aspects of erection and installation of hydro mechanical component as per design standard and technical specification.
- Review the quality reports submitted by the contractor and instruct for the necessary modifications or corrections if required
- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service

#### **Position 6: Procurement and Contract Management Specialist**

26. The Procurement and Contract Management Specialist will be responsible to support and train the CPMO and PIU offices in procurement and contract management. The specialist will have a Master degree with 12 years' general experience and 8 years of specific experience in the field of procurement, particularly of open competitive bidding of civil works and goods, and community procurement. Experience in procurement under projects assisted/funded by Development Partners, ADB or World Bank is essential. Responsibilities will include but are not limited to the following

- Prepare clear guidelines and associated templates for the PIUs using community contracting and open competitive bidding (OCB) for civil works.
- Train CPMO, CAMO and PIUs on correct tender procedures and provide support for contract supervision to ensure the procedures are followed.
- Train selected CPMO and PIUs staff to serve as procurement specialists for the project who will: (a) prepare all individual tender documents and review procurement done at PIUs prior to procurement; (b) be responsible for tender opening and evaluation; (c) prepare the contract documents and assist the AKCs in preparing the required documents for procurement of agriculture equipment
- Assist the CPMO in overseeing the preparation of bidding documents, the

- procurement process, bid evaluation and prepare recommendations of contract award. Support the checking of documents before submission to ADB.
- Supervise procurement process and contract management and submit report findings to CPMO for follow-up.
  - Prepare a comprehensive template for the enlisting of the contract packages carried out under the project and prepare a periodic record of their progress and ensure the reflection of these progress in trimester progress report.
  - Assist the CPMO in building the capacity of PIUs staff in contract management, including preparation of guidelines/minimum standards, a training program, and a monitoring program for DWRI management. The guidelines should include procedures to be followed when contractors under-perform, including guidance on appropriate remedial actions.
  - The consultant will report to TL/DTL.
  - Any other necessary works to meet the objective of the consulting service

### **Position 7: Digital Communications Specialist**

27. The digital communications specialist will be responsible for the development and implementation of the program for establishing digital advisory services to provide key information to farmers, WUAs/WUCs and other stakeholders. The specialist will have master's degree in information technology/digital communications or related field and will have 12 years general experience and 8 years specific experience in the design and/or implementation of digital communications or development of digital communications to rural communities. Must be fluent in written and spoken English and an ability to draft concise reports; high communication skills; high level computer skills including the development of visual and digital communications, applications of social media and the development of training materials. High level experience with computer-based graphic design and development with communication technologies is essential including social media, video, SMS and apps. Responsibilities will include but are not limited to the following:

- Carry out a review of current communication systems being used for irrigation and agriculture in Nepal.
- Identify potential areas where the project's digital communications strategy can potentially make the most impact and value added including the scope to build on existing initiatives as well as develop new programs.
- Develop an overall communications and awareness action plan for the project and demonstrate the role of digital communications to complement traditional systems.
- Design digital advisory services to provide cost effective access to climate, irrigation and agriculture information disbursed to remote irrigation areas and different demographic groups of farmers and stakeholders, government officials, private sectors and small-scale entrepreneurs through development of application software.
- Develop the digital advisory system with necessary modules and functionality for managing and analyzing relevant data.
- Ensure that the system is user friendly, visually appealing and offers a seamless user's experience.
- The plan should include the institutional framework, type of technologies to be used, source and types of communications and identifying the proposed recipients. The plan will include the costs of establishing the systems and potential sources of revenue and finance to ensure sustainability after the completion of the project.
- Once approved, the digital advisory systems will be initially piloted in 3 districts over 2 years. Based on lessons learnt, the program will be upscaled to all the

- districts within the project area over four years.
- Lead to prepare quality communication materials including audio visual materials and videos of the demonstrations that can be disseminated through the digital advisory services.
- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service

### **Position 8: Social Development Specialist**

28. The social development specialist will be responsible to ensure that the project's social safeguards, social mobilization and social interventions are planned and implemented as per the project's requirements. The specialist will be responsible to the Team Leader and the Project Director. The specialist will be based in the CPMO and make frequent trips to provide guidance and supervision to the regional specialists. The Social Development Specialist will have a Master's Degree in social sciences or related fields and have 12 years of general experience and 8 years specific experience in participatory community development, knowledge of social inclusion issues in the sector and experience in undertaking GESI trainings at different levels; experience in promoting women's advancement and gender equality; knowledge in the area of rural development; excellent computer skills and excellent communication and interpersonal skills. Also have and be proficient in written and spoken English with an ability to prepare clear and concise reports. Responsibilities will include but are not limited to the following;

- Work in close collaboration with the project implementation team to assess the needs and requirements for social interventions during the implementation period and provide necessary support to plan and implement the social development activities including social mobilization, preparing institutional development plan.
- Prepare communication awareness and participation plan in coordination with Environment, Social Safeguard and Climate Change Branch of DWRI. Take the lead on gender and social inclusion, social safeguards, consultation and participation.
- To be primarily accountable for the implementation and reporting of GESI plan, voluntary land donation, due diligence framework and the Indigenous Peoples planning to the Project Director and Team Leader on a quarterly basis.
- Develop a module for capacity development training to all project staffs in GESI mainstreaming and provide the same at the federal, provincial and sub-project levels.
- Assess the quality and completeness of disaggregated data being gathered to assess project benefits and impacts for each sub-project;
- Review the project's MIS system for socio-economic data collection and ensure system updates to support M&E of social aspects;
- Prepare annual in-depth project M&E report discussing impacts from gender, ethnicity, and poverty reduction perspectives, utilizing qualitative instruments and case studies. The reports will include feedback from project beneficiaries and highlight successes and lessons learned.
- Support and supervise the work of the provincial/federal offices Social Development Specialists and provide necessary technical backstopping.
- Prepare, update and ensure the timely disclosure of draft and final RP and IPP in locations and formats accessible and understandable to the public and affected persons.
- Assist CPMO to coordinate across the project components in the overall management, implementation, monitoring and reporting of social safeguards compliance. Provide oversight on the social safeguard management aspects of

- projects and ensure that RP and IPP and impact avoidance measures outlined in the RF are implemented by project implementation offices and contractors.
- Review, monitor, and evaluate the effectiveness of the implementation of RP and IPP, and recommend necessary corrective actions.
  - Facilitate as a resource person in social safeguards training activities conducted by CPMO for the project implementation offices, contractors, and WUAs for capacity building to implement the RP and IPP.
  - Guide the CPMO and other project implementation offices in addressing any grievances brought about through the grievance redress mechanism in a timely manner.
  - Consolidate monthly and quarterly social safeguard monitoring reports from FMIS, HLIP and RIP and submit quarterly and semi-annual social safeguard monitoring reports to CPMO.
  - Guide the CPMO to prepare and implement a community awareness and participation plan and support in preparing other information and campaign materials.
  - Identify any non-compliances and assist in preparing time-bound corrective action plans, if and as required.
  - The consultant will report to TL/DTL.
  - Any other necessary works to meet the objective of the consulting service

### **Position 9: Environmental Safeguards Specialist**

29. The Specialist will have a master degree in environmental science or related field with 12 years of general working experience and have 8 years of specific experience in environmental safeguards monitoring in implementation of water resources related projects. Fluency in written and spoken English and an ability to draft concise reports; good communication skills; computer proficiency is essential. The Specialist will be responsible to undertake the following activities.

- The Environment Specialist (ES) will be responsible to undertake the safeguards monitoring and reporting activities, as described hereunder, following the Environment Protection Act, 2019 (EPA), and Environment Protection Rule, 2020 of the Government of Nepal (GoN) (as amended from time to time) and in accordance with the Safeguard Policy Statement (SPS), 2009 of ADB and the project EARF.
- The ES will support the CPMO in overall environmental safeguards management, quality assurance and reporting and support PIUs in ensuring compliance with the environmental management plan (EMP) requirements.
- Thoroughly review the existing IEE, EMP and EARF of FMIS Sub projects, Hill Lift Irrigation Sub projects and Rajapur Irrigation Project. Work closely and transfer knowledge to the staff of Environment and Social Safeguards of DWRI while undertaking all safeguards activities in the project;
- Support each PIUs to assign a focal person for safeguards and train the person in environmental compliance monitoring by filling environment monitoring checklists and submit a monthly report to CPMO;
- Train PIUs focal personnel to collect site-specific secondary and primary data on the physical, biological, socio-economic and cultural environment of the sub-project areas. Use checklist, questionnaire and participatory tools for collection of baseline data for the update and preparation of IEE;
- Develop a field monitoring checklist and a template of safeguards reporting in periodic progress reports and train quality control engineers in routine compliance

- monitoring;
- Assess institutional capacity to implement EMP, EARF requirements, and GRM at central and local levels, and conduct necessary capacity strengthening orientation and training to the PIUs.
- In coordination with Social Development Consultant, support the PIU staffs in establishing a GRM in the project. Prepare a flyer on GRM and train project staff in complying a process while addressing public grievances;
- Prepare a template of annual safeguards compliance monitoring report. Collect monthly monitoring checklist from PIUs safeguards focal person and prepare annual safeguards compliance monitoring report;
- Ensure that EMP recommended activities are all implemented in the project. Ensure required costs are included as BOQ item. Attach copy of EMP to the contract agreement document of the contractor. Periodically orient contractor's staff in complying to the EMP requirements;
- Periodically input environment related information in the automated software monitoring system prepared by ADB;
- Monitor safeguards compliance of the FMIS, Hill Lift Schemes and Rajapur Project and prepare semi-annual environmental compliance monitoring report;
- Undertake other works as advised by the TL/DTL or the CPMO.
- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service

#### **Position 10: Financial Management Specialist**

30. The Financial Management Specialist will have a master degree in management/accountancy or related field, responsible to support the establishment and implementation of the project's financial accounting systems. The consultant will report to the Team Leader and the Project Director. The specialist will have a general experience of 12 years and specific experience of 8 years in financial management. The consultant should have a broad knowledge base and experience in GON and development partner supported project accounting and financial management system. The consultant's responsibilities will include but are not limited to the following;

- Monitor project financial disbursement and recommend ways to facilitate and streamline Government administrative procedures for disbursement;
- Provide training to CPMO, CAMO and PIUs heads and account staffs on project budgeting, accounting, reporting and SOE procedures as given in the Project Administration Manual and Operations Manual;
- Review current project financial accounting system at the CPMO, RIMO and PIUs level and propose improvements (computerized project accounting system);
- Provide inputs to the cost estimation process;
- Assist the CPMO and CAMO in operating a system of preparing and reporting project financial statements on a quarterly basis, and consolidating financial statements for the entire Project;
- Assist the CPMO and CAMO in operating the system of comparing the financial statements against physical progress and contractual obligations, analyzing key variances and recommending appropriate actions and measures, and prepare quarterly monitoring reports;
- Assist CPMO and CAMO to develop project implementation monitoring systems and provide support in developing their capacity in financial management;
- Assist CPMO and CAMO to prepare annual program and budget of the project.

- The consultant will report to TL/DTL.
- Any other necessary works to meet the objective of the consulting service.

## **B Hill Lift Offices**

### **Position 1: Hill Lift Irrigation and Quality Control Engineer**

31. The hill lift irrigation and quality control engineer will have overall responsibility to support the construction, commissioning, and establishing sustainable management of the pilot hill lift irrigation systems. The engineer will have responsibility to ensure the quality control of the piped irrigation systems of pumped and piped water systems including laying, testing of pipes, electrification, pumps and transmission and construction and testing of tubewells. The engineer will also support the agriculture specialist in the establishing and developing long term sustainable management of the completed schemes including ensuring targets of cost recovery of MOM are met. The engineer will have a master's degree in civil or irrigation engineering or related field, and will have 12 years of general experience and have 7 years of specific project experience in piped irrigation or hill lift irrigation or piped water supply systems including pumps, pipes, electrification or experience in design and construction of irrigation system. Responsibilities will include but are not limited to the following;

- Prepare detailed designs, specifications and BOQs for all the outstanding work of HLIP in consultation with TL and DTL and assist implementing agency and CPMO for its approval.
- Prepare draft of the *Design Manual for Hill Lift Irrigation Schemes*.
- Develop training materials to be used in the design and quality control training of project office personnel, WUA and other stakeholders and provide training on best construction practices;
- Assist project office engineers and WUAs/WUCs to jointly identify maintenance requirements for the post-construction period;
- Prepare construction related reports as required by project management including bidding and construction stages of each sub-project and track in the MIS;
- Monitor construction activities ensuring that (i) effective supervision of works by HLIP supervisor/ engineer, (ii) the contractor has a capable manager on site, (iii) proper construction practices are being followed, and (iv) the design is being followed and quantities checked;
- Assist CPMO in construction monitoring and quality control.
- Support PIUs in verification of contractors' final payment certificate.
- Work closely with the design engineer and hydrogeologist on the planning, design and bidding of the hill lift schemes.
- Work closely with the hill lift project offices to support the construction supervision and management of the HLIP.
- Work closely with the digital communication specialist to prepare and implement a comprehensive communication plan for the hill lift projects including preparation of asset management plan (AMP), setting out the post construction plans to operate and maintain the systems and build up intensive agriculture.
- Work with the Agriculture specialist to strengthen the WUA and establish new Water User Cooperatives.
- Prepare on -farm management plan and support the program of demonstrations of the modern on-farm irrigation (pipes, micro irrigation etc.) as well as upscaling of modern on-farm irrigation through partial investment subsidies.
- Support the WUA/WUC to select and train operators to manage the completed systems.

- Assist project office engineers and sub-engineers in putting in place a system of effective supervision of construction work carried out by contractors and WUAs;
- Work with other specialists and the WUA and WUC, Prepare sustainable and effective management, operation and maintenance (MOM) plan for the hill lift schemes.
- Prepare construction related reports as required by project management.
- The consultant will report to DTL
- Any other necessary works to meet the objective of the consulting service

### **Position 2: Hill Lift Agriculture Specialist**

32. The Hill Lift Agriculture Specialist will have a key role to support the implementation of the agriculture development programs in the hill lift projects. The specialist will have a master's degree in agriculture or an equivalent related field and will have 12 years of general experience and have a specific experience of 7 years relating to agriculture development including the establishment of high value cropping and marketing. The consultant should have experience in establishing and supporting cooperatives as well as program for agriculture support and credit. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, working experience in MIS and work planning systems are essential. Responsibilities will include but are not limited to the following.

- Lead the agriculture programs for the hill lift projects.
- Work closely with the AKCs and the HLIP to implement the program of training and institutional development of the devolved institutions including the irrigation and agriculture units at the local level.
- Lead the program of strengthening of the field level management including strengthening of the WUAs as well as establishing a WUC in each of the hill lift schemes.
- Provide key support for the implementation of the agricultural development plans in the HLIP; the specialist will work closely with the PIUs including the program of agriculture training and demonstrations, provision of support subsidies to promote agriculture enterprises;
- Guide planning and implementation of ADP for crop diversification and commercialization with effective marketing support towards maximizing on-farm income;
- Collect information for M&E of the agricultural activities at ISP level and suggest further improvement as necessary;
- Establish the arrangements using MIS systems for monitoring and evaluation of the various institution and agriculture programs and continuously update the MIS input for M & E of the agricultural activities.
- Support central Agriculture specialist in preparation of procedure guidelines of WUCs formation in selected irrigation schemes;
- The consultant will report to Central Agriculture specialist.
- Any other necessary works to meet the objective of the consulting service.

### **Position 3; Hill Lift Social Development Specialist**

33. The Hill Lift Social Development Specialist will be responsible to ensure that the social safeguards, social mobilization and social interventions in each hill lift sub-project are planned and implemented as per the project's requirements. The specialist will be based in the Hill Lift Office and will make frequent trips to each sub-project, provide guidance and supervision to the sub-projects and provide support to the Junior Extension Technicians/Social Mobilisers in each

sub-project. The Social Development Specialist will have a master's degree in social sciences or related fields; 12 years of general experience and 7 years of specific experience in relevant field (; excellent computer skills and excellent communication and interpersonal skills. The specialist will have experience in M&E systems and comprehensive knowledge of data management. Also have and be proficient in written and spoken English with an ability to prepare clear and concise reports. Responsibilities will include but are not limited to the following;

- Work in close collaboration with the Agriculture Specialist to develop and unified approach to the initiatives for institutions, agriculture and social mobilization;
- Support the project implementation teams for each hill lift sub-project to assess the needs and requirements for social interventions during the implementation period and provide necessary support to plan and implement the social development activities including social mobilization;
- Take the lead on gender and social inclusion, social safeguards, consultation and ensuring adequate stakeholder participation in each sub-project;
- Carry out capacity development training and provide support to all project staff in GESI mainstreaming.
- Review the existing ISF collection and utilization plan of the WUA and prepare a comprehensive strategy for fixing, collecting and utilizing ISF for ensuring sustainable O & M plan. Prepare institutional development plan for HLIP project.
- Collect and input the information into the MIS at the HLIP and the structure of data to be collected disaggregated by sex, caste and ethnicity that provides information on the indicators established in the design and monitoring framework (DMF);
- Prepare a comprehensive GRC guideline for HLIP and support in forming GRCs and mechanism for grievance redress policy as per the guideline at the subproject and SMC level, ensuring it is fully functional prior to or during the award of the first contract, or within three months of loan effectiveness, whichever is earlier. Address any grievances brought about through the grievance redress mechanism in a timely manner as per the RF.
- Analyze socio-economic data of all monitoring reports, as well as undertake quarterly specialized GESI monitoring.
- Update sample RP of HLIP in Baireni based on detailed designs and prepare new RPs for remaining HLIPs in accordance with the RF prepared for the project.
- Ensure that all conditions in the RP and IPP are implemented and/or complied with before the execution of project works.
- Supervise voluntary land donation and temporary economic impacts with crop compensation and provide any assistance required for conducting independent third-party verification.
- Support HLIP implementation offices in supervising voluntary land donation and compensation-related surveys, including: (a) census/inventory of loss surveys for permanent and temporary land use/impacts; and (b) socio-economic surveys of affected landowners donating lands for the reservoir tank if required.
- Assist implementation offices in the implementation of the community awareness and participation plan in the HLIP area.
- Conduct continuous meaningful consultations and information disclosure with the support of the Community organizer.
- Organize courses for training contractors, preparing them for resettlement RP implementation, social safeguard monitoring requirements, and taking immediate action to mitigate IR impacts during RP implementation.
- Ensure timely submission of monthly, quarterly progress reports, and semi- annual social safeguards monitoring reports to CPMO, with the support of implementation offices.

- Identify any non-compliances and assist in preparing time-bound corrective action plans, if and when required.
- Maintain and update project component-wise database of resettlement/grievance-related issues and inform implementation offices for timely actions.
- Support CPMO/CAMO/HLIP implementation offices/AKC/WUA in all awareness, training, and capacity-building activities related to social safeguards and GESI-AP as a resource person.
- The consultant will report to Central Social Development specialist.
- Any other necessary works to meet the objective of the consulting service.

### **C. Rajapur Irrigation Project**

#### **Position 1: Rajapur Irrigation Planning and Design/Quality Control Engineer**

34. The Rajapur Irrigation Planning and Design/Quality Control Engineer will have overall responsibility to prepare the design for approval and supervise the construction works at the Rajapur. The engineer will have a master's degree in civil or irrigation engineering or related field, and will have 12 years of general experience and 7 years of specific experience in design and construction of large/medium scale irrigation systems. Responsibilities will include but are not limited to the following;

- Prepare and finalize the designs of outstanding works for the Rajapur irrigation project including the approach channel and assess options for the design including the trash deflector in consultation with RIMO and in guidance of TL and DTL.
- Supervise the construction stages of the project and track in the MIS;
- Supervise the construction activities ensuring that (a) effective supervision of works by RIMO supervisor/ engineer, (b) the contractor has a capable manager on site, (c) proper construction practices are being followed, (d) the design is being followed, and (e) quantities of work is measured accurately;
- Provide support and training to project office engineers, WUA and other stakeholders in the technical aspects of the Rajapur Irrigation System planning and design;
- Assist RIMO in construction monitoring and ensure quality control, check and verify the final contractors' payment certificate with inspection of completed structures.
- Develop training materials to be used in the quality control training of RIMO personnel, and provide training on best construction practices.
- Assist RIMO engineers and WUAs/WUCs to jointly identify operation and maintenance requirements for the post-construction period.
- Prepare on farm water management and integrated crop and water management plan and support the implementation of programs for on-farm water management including strengthening of WUA, improved management operation and maintenance, on-farm irrigation management.
- Prepare detail canal operation plan and asset management plan Rajapur irrigation systems.
- Conduct Survey works of approach channel in RIP
- The consultant will report to DTL
- Any other necessary works to meet the objective of the consulting service.

#### **Position 2: Rajapur Agriculture Specialist**

35. The Rajapur Agriculture Specialists will have the key role to support the implementation of the institutions and agriculture development programs in the Rajapur Irrigation Project. The

specialist will have a master's degree in agriculture or an equivalent related field and will have 12 years of general experience and have a specific experience of 7 years relating to agriculture development and strengthening the rural institutions including WUA and agriculture cooperatives is important. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, working experience in MIS is essential. The consultant's responsibilities will include but are not limited to the following.

- Provide the key support for the agriculture and institution programs for the Rajapur Irrigation System.
- Work closely with RIMO and Agriculture Office to implement the program of training and institutional development including the irrigation and agriculture units at the local level.
- Provide key support to RIMO and Agriculture Office for the program of strengthening of the field level management including strengthening of the WUAs as well as establishing WUCs in selected areas.
- Provide key support for the implementation of the agricultural development plans in the irrigation area; the specialist will work closely with the RIMO and Agriculture Office including the program of agriculture training and demonstrations, provision of support subsidies to promote agriculture enterprises;
- Guide planning and implementation of ADP for crop diversification and commercialization with effective marketing support towards maximizing on-farm income;
- Assist in collecting information for M&E of the agricultural activities at ISP level and suggest further improvement as necessary;
- Establish the arrangements using MIS systems for monitoring and evaluation of the various institution and agriculture programs;
- Work in close coordination with design engineer to prepare canal operation plan , asset management plan of Rajapur Irrigation System.
- Support Central Agriculture Specialist in preparation of procedure guidelines of WUCs formation in selected irrigation schemes.
- The consultant will report to Central Agriculture specialist.
- Any other necessary works to meet the objective of the consulting service.

### **Position 3: Rajapur Social Development Specialist**

36. The Rajapur Social Development Specialists will be responsible to ensure that the social safeguards, social mobilization and social interventions in sub-project are planned and implemented as per the project's requirements. The specialist will be based in the RIMO and will make frequent trips to provide guidance and supervision to the project and provide support to the Social Mobilisers assigned to Rajapur. The Social Development Specialist will have a master's degree in social sciences or related fields; have 12 years of general experience and 7 years specific experience in participatory community development, knowledge of social inclusion issues in the sector and experience in undertaking GESI trainings at different levels; experience in promoting women's advancement and gender equality; knowledge in the area of rural development; excellent computer skills and excellent communication and interpersonal skills. The specialist will have experience in computerized M&E systems and comprehensive knowledge of data management. Also have and be proficient in written and spoken English with an ability to prepare clear and concise reports. The consultant's responsibilities will include but are not limited to the following;

- Work in close collaboration with the project implementation team to assess the needs and requirements for social interventions during the implementation period and provide necessary support to plan and implement the social development

- activities including social mobilization.
- Take the lead on gender and social inclusion, social safeguards, consultation and ensuring adequate stakeholder participation in the sub-project.
- To be primarily accountable for the implementation and reporting of GESI plan, voluntary land donation, due diligence framework and the Indigenous Peoples planning to the Project Director and Team Leader on a quarterly basis.
- Carry out capacity development training and provide support to all project staff in GESI mainstreaming as a resource person;
- Review the existing ISF collection and utilization plan of the WUA and prepare a comprehensive strategy for fixing, collecting and utilizing ISF for ensuring sustainable O & M plan. Prepare institutional development plan for RIP project.
- Assess the quality and completeness of disaggregated data being gathered to assess project benefits and impacts for project;
- Facilitate the flow of information into the MIS at the project level and the structure of data to be collected disaggregated by sex, caste and ethnicity that provides information on the indicators established in the design and monitoring framework (DMF)
- Prepare a comprehensive GRC guideline for RIMO and support in forming GRCs and mechanism for grievance redress policy as per the guideline;
- Analyze socio-economic data of all monitoring reports, as well as undertake quarterly specialized GESI monitoring.
- Prepare annual in-depth project M&E report discussing impacts from gender, ethnicity and poverty reduction perspectives, utilizing qualitative instruments and case studies. The reports will include feedback from project beneficiaries and highlight successes and lessons learned.
- Coordinate with the Environment, Social Safeguard and Climate Change Branch of DWRI in the implementation of the Consultation, Participation, and Communication Plan and GESI Plan.
- The consultant will report to Central Social Development specialist.
- Any other necessary works to meet the objective of the consulting service.

#### **D: Province Offices**

37. There will be 3 project offices (Koshi, Madesh, and Bagamati). The project office consultants will be based in each province office but will be required to work very closely with the PIUs and in the sub-project sites.

#### **Position 1: Provincial Irrigation/ Quality Control Engineers**

38. The provincial irrigation/quality control engineers will be responsible for support and quality control of the construction of the FMIS schemes. The engineer will have a Master degree in civil/ water resources/ irrigation engineering or related field and have 12 years in general experience and 7 years specific experience in the design and supervision of construction works in irrigation projects. The engineers will be based in province offices but will make frequent visits to the sub-project sites. The consultant's responsibilities will include but are not limited to the following;

39. Work closely with the WRIDDs to support the construction supervision and contract management;
- Supervise the construction activities ensuring that (a) effective supervision of works by WRIDD supervisor/ engineer, (b) the contractor has a capable manager

- on site, (b) proper construction practices are being followed, (c) the design is being followed, and (d) quantities of work is measured accurately;
- Assist WRIDDs in construction monitoring and quality control, check and verify the contractors' final payment certificate with inspection of completed structures,
- Provide training to the WUA and the Sub-project Monitoring Committee (SMC), monitor their activities and follow up on any complaints received;
- Develop training materials to be used in the quality control training of WRIDD personnel, and provide training on best construction practices;
- Assist WRIDD engineers and WUAs to jointly identify maintenance requirements after the post-construction period;
- Ensure the environmental management plans (EMP) are implemented according to the contractual requirements;
- Prepare on-farm water management plan and support the implementation of the programs including strengthening of WUA, improved management operation and maintenance, Integrated Crop and Water Management and the Pilot Community Conjunctive Groundwater at selected FMIS sites.
- Monitor the bidding and construction stages of each subproject and track in the MIS;
- Prepare construction related reports as required by project management.
- The consultant will report to DTL.
- Any other necessary works to meet the objective of the consulting service.

## **Position 2: Provincial Agriculture Specialist**

40. The Provincial Agriculture Specialists will have the key role to support the implementation of the institutions and agriculture development programs in the Hill and Terai FMIS sub-projects. The specialist will have a master's degree in agriculture or an equivalent related field and will have 12 years of general experience and 7 years of specific experience relating to agriculture development. Experience in strengthening the rural institutions including WUA and agriculture cooperatives is important. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, working experience with computer-based MIS and work planning systems is essential. The consultant's responsibilities will include but are not limited to the following.

- Provide key support for the agriculture and institutional development programs for the hill and terai FMIS sub-projects.
- Work closely with the WRIDDs and AKCs to implement the program of training and institutional development of the devolved institutions including the irrigation and agriculture units at the local level;
- Provide key support to the WRIDDs and AKCs for the program of strengthening of the field level management including strengthening of WUAs as well as establishing a WUCs in selected sub-projects;
- Provide key support for the implementation of the agricultural development plans in the FMIS sub-projects; the specialist will work closely with the WRIDDs and AKCs including the program of agriculture training and demonstrations, provision of support subsidies to promote agriculture enterprises;
- Guide planning and implementation of ADP for crop diversification and commercialization with effective marketing support towards maximizing on-farm income;
- Assist in collecting information for M&E of the agricultural activities at ISP level and suggest further improvement as necessary;
- Establish the arrangements of using MIS systems for monitoring and evaluation

- of the various institution and agriculture programs
- Support central Agriculture specialist in preparation of procedure guidelines of WUCs formation in selected irrigation schemes.
- The consultant will report to Central Agriculture specialist and DTL.
- Any other necessary works to meet the objective of the consulting service.

### **Position 3: Provincial Social Development Specialist**

41. The Provincial Social Development Specialists will be responsible to ensure that the social safeguards, social mobilization and social interventions in each sub-project are planned and implemented as per the project's requirements. The specialist will be based in the province offices and will make frequent trips to provide guidance and supervision to the subprojects and provide support to the Junior Extension Technicians/Social Mobilisers in each sub-project. The Social Development Specialist will have a master's degree in social sciences or related fields; 12 years of general experience and 7 years of specific experience in participatory community development, knowledge of social inclusion issues in the sector and experience in undertaking GESI trainings at different levels; experience in promoting women's advancement and gender equality; knowledge in the area of rural development; excellent computer skills and excellent communication and interpersonal skills. The specialist will have experience in M&E systems and comprehensive knowledge of data management. Also have and be proficient in written and spoken English with an ability to prepare clear and concise reports. The consultant's responsibilities will include but are not limited to the following;

- Work in close collaboration with the project implementation team for each FMIS sub-project to assess the needs and requirements for social interventions during the implementation period and provide necessary support to plan and implement the social development activities including social mobilization;
- Take the lead on gender and social inclusion, social safeguards, consultation and ensuring adequate stakeholder participation in each sub-project;
- To be primarily accountable for the implementation and reporting of GESI plan, Resettlement Plan, Indigenous People development Plan to the Project Director and Team Leader on a quarterly basis.
- Carry out capacity development training and provide support to all project staff in GESI mainstreaming;
- Review the existing ISF collection and utilization plan of the WUA and prepare a comprehensive strategy for fixing, collecting and utilizing ISF for ensuring sustainable O & M plan. Prepare institutional development plan for FMIS sub-project.
- Collect and assess the quality and completeness of disaggregated data to assess project benefits and impacts for each sub-project;
- Review the project's MIS system for socio-economic data collection and ensure system updates to support M&E of social aspects;
- Prepare annual in-depth project M&E report discussing impacts from gender, ethnicity and poverty reduction perspectives, utilizing qualitative instruments and case studies. The reports will include feedback from project beneficiaries and highlight successes and lessons learned;
- Prepare Communication and consultation plan for the project and coordinate with the Environment, Social Safeguard and Climate Change Branch of DWRI in the implementation of the Consultation, Participation, and Communication Plan and GESI Plan.
- Assist WRIDD/AKC in overall management, implementation, monitoring, and reporting of social safeguards compliance.

- Ensure that information on safeguard planning and implementation is updated and submitted to CPMO with the support of WRIDD and the contractor.
- Hold consultations with beneficiary farmers, update IR-DDR (if required), and submit it to CPMO for review and approval.
- Be responsible for the day-to-day implementation and monitoring of IPP.
- Conduct continuous public consultations and information disclosure with the support of social mobilizers.
- Ensure timely submission of monthly and quarterly progress reports, as well as semi-annual social monitoring reports to CPMO, with the support of WRIDDs.
- Prepare a comprehensive GRC guideline for FMIS and support in forming GRCs and mechanism for grievance redress policy as per the guideline at the subproject and SMC level, ensuring it is fully functional prior to or during the award of the first contract, or within three months of loan effectiveness, whichever is earlier. Address any grievances brought about through the grievance redress mechanism in a timely manner as per the RF.
- Identify any non-compliances and assist in preparing time-bound corrective action plans, if and when required.
- Maintain and update a subproject-wise database of grievance-related issues and report to CPMO for timely actions.
- Support WRIDDs/AKC/WUA in all awareness, training, and capacity-building activities related to social safeguards and GESI-AP implementation as a resource person.
- The consultant will report to Central Social development specialist and DTL.
- Any other necessary works to meet the objective of the consulting service.

### **C. Non- key Experts (Support Consultants)**

42. The non-key experts will provide the support to the project experts. The non-key experts are sub-professional positions and the consultant must submit a pool CVs of the different categories non-key with the technical proposals. Their CVs will be checked to ensure they meet the minimum qualifications, but they will not be evaluated.

43. Support consultant (SCs) is a pool of well qualified but less experienced consultants to provide support to the various project activities when and as required. The SCs will play a key support role to the CPMO, CAMO and PIUs Offices. Proposed SCs will be Electrical Engineer, Engineer for on-farm water management and design and construction, MIS management, Financial Management, monitoring and information systems, GIS/ AutoCAD officer. The SCs will work under the direction of the PD, TL, DTL and the relevant key consultants. The SCs inputs will depend on the requirements, and they will be expected to travel between the various project locations as and when required. The SCs will have minimum Bachelor level in a relevant subject and should have at least 2 years' relevant experience. Computer literacy will be important, the actual requirements will be determined during the project implementation and different qualification and I skills and maybe required, estimated inputs are as below:

- Electrical Engineer: (1 position-2 person-months); to support for the design and supervision of the installation of electrical works under the project including electrification of the intake gates at Rajapur, electrification of the hill lift systems, pilot electrification of tubewells. Should have qualification in electrical engineering or other relevant subject.
- Engineer I (On-farm water management): (1 position-44 person-months); to support for on-farm water management works in Rajapur Irrigation System, FMIS and HLIP. Should have qualification in Civil/Agriculture engineering or relevant

subject.

- Engineer-II (Design and construction): (1 positions- 44 person-months). To provide support to planning design and support for the supervision of the infrastructure programs. Should have qualifications in civil engineering or other relevant subject.
- MIS Management Support: (1 position-44 person-months); to provide management support for MIS, MIS based field monitoring, information technology. Should have qualifications in Information Technology or relevant subject.
- Financial Management Support: (1 position- 22 person-months): Assist in disbursement and financial management, support PMU account officer in accounting, manage monthly SOEs from PIUs, prepare withdrawal application and maintain disbursement records. Should have qualifications in Management/Accountancy or relevant subject.
- Environmental Safeguard Monitors: (1 positions-44 person-months each) to support CMPO in undertaking the safeguards monitoring and reporting activities from the project components level to comply with the GoN and ADB environmental safeguard requirements, overall environmental safeguards management, quality assurance and reporting ensuring compliance with the environmental management plan (EMP) requirements. Should have qualification in environmental science or relevant subject.
- GIS/AutoCAD Officer: (1 positions-22 person-months). To provide support to planning/ design Engineer in preparation of GIS maps and Engineering drawings. Should have qualifications in engineering or other relevant subject.

**Table 2: Indicative Provisional sums**

Items	Descriptions
Training, Seminars, Workshops	For Routine trainings like Procurement, SPPR and MIS, workshops like Annual progress, Financial Management, Guideline of WUCs, HL Manual etc. by the PIMS or CPMO to all project staffs, beneficiaries and stakeholders.
Office Equipment, machinery and furniture	Procurement of equipment like computers, photocopy machine, printers, power inverter etc. for all Central and Provincial level PIMS office and Furniture and Furnishing for establishment of their central and field offices.
Updating SPPR Software	The existing SPPR software is about 10 years old and need updates for SPPR preparation of sub-projects of Batch 2 and 3.
Survey	Survey and specific studies including topo-survey works of approach channel in Rajapur Irrigation System

## II TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS

### Introduction

### Outline of the Project

1. The IMEP project will be implemented over a period of 72 months, indicatively November 2024 to October 2030. The detailed implementation plan for the project is in the project administration manual (PAM). The project consultancy support will be in two parts; (i) individual consultants who will be tasked with developing the key strategies and approaches and providing support to the project management and the main project management consultants (PIMS); and (ii) the project implementation and management support consultants (PIMS) who as the main consultants will be tasked with overall project implementation support to the implementing agencies (IAs) and project implementing units (PIUs.)

2. In addition to the PIMS the project will engage directly 45 person-months of individual consultants (13 pm international and 32 p-m national) the individual consultants will work closely

and support the CPMO, CAMO, IAs and PIUs and the PIMS consultants as described below.

		<b>Input (p-m)</b>
<b>International Consultants</b>		
1	Irrigation Modernization Specialist	4.0
2	Institutional Specialist	4.0
2	Digital Communications Specialist	3.0
3	Finance and Credit Specialist	2.0
<b>Sub Total International</b>		<b>13.0</b>
<b>National Consultants</b>		
1	Institutions and Cooperatives Specialist	8.0
2	Rural Finance Specialist	6.0
3	Independent Safeguards Consultant Land Donation	0.5
4	Unallocated (as required)	17.5
<b>Sub Total National</b>		<b>32.0</b>
<b>Total Individual Consultants</b>		<b>45.0</b>

### **International Individual Consultants**

#### **International Irrigation Modernization Specialist (4.0 p-m)**

3. The Irrigation Modernization Specialist will work closely with the Project Director and the PIMS team including the Team Leader and Deputy Team Leader. The tasks of the specialist will be to; (i) support and guide the overall project implementation to ensure the targets for all the three key outputs are met; (ii) to identify constraints and bottlenecks and develop pragmatic solutions to resolve problems and (iii) to support development of the details including refinements and adjustments to the implementation program as required. The specialist will have an advanced degree in civil engineering, irrigation or water resource management or equivalent related field, with at least 20 years of technical project experience with at least 15 of those years leading the implementation of the participatory irrigation projects including irrigation, institutional and agricultural development including ensuring quality control and monitoring systems. Must be fluent in written and spoken English and an ability to draft concise reports; good communication skills; excellent computer skills, working experience with computer-based MIS and work planning systems is essential. Responsibilities will include but not limited to the following.

- To support the Project Director and the PIMS Team Leader and Deputy Team Leader with the overall project implementation.
- To review the progress and the PIMS consulting team including field visits and provide guidance to ensure the consultant resources are effectively used and engaged in project activities to collectively deliver the required services and outputs.
- To review the capacities and resources of the government project management offices including the CPMO, CAMO, Sub Project Offices, Provincial Offices, WRDDs and AKC, prepare proposals to help strengthen project management at the different levels.
- Assist the CPMO and PIMS Team Leader in managing the contract for the PIMS consulting firm.
- Assist the various project institutions at different levels to implement the agreed detailed subproject implementation systems, procedures, and arrangements, by monitoring and advising on the performance.
- Based on a sample of projects including field visits assess the technical quality of subproject preparation and implementation including engineering, institution and

agriculture aspects and the social agendas such as gender, ethnic minorities, dalit and other vulnerable people. prepare proposals to fine tune and adapt the agreed detailed subproject implementation systems, procedures, and arrangements by incorporating the findings and lessons learnt.

- To take overall lead but working closely with other specialists including the national institutions specialist to update the guidelines for ICWM for FMIS schemes which will incorporate an overall FMIS sector development strategy which will include guidelines for FMIS including guidelines for ICWM including design, management, and extension support.
- Building on the programs under IMEP Develop a road map for the long-term strategy for investment and management of the FMIS schemes in Nepal including climate change.

#### **International Institutions Specialist (4.0 person-months)**

4. The Institutions Specialist will provide expertise to support the development of the management and institutional framework to ensure the project investments meet their targets of irrigation efficiency, productivity, and sustainability; and to develop the institutional parts of the proposed new and modernized approach to Crop and Water Management (ICWM). The specialist will work closely with the CPMO, CAMO, other individual experts and the PIMS team, Provincial and Project Offices, WRIDDs and AKCs. The expert must have an advanced university degree in irrigation, agriculture or institutions or related field and must have at least 12 years of proven work experience in institutions relating to irrigation, agriculture, including new approaches to strengthen and develop sustainable institutions for modernized irrigation and agriculture at field and local government levels. The expert should demonstrate extensive experience of working with agricultural and rural communities and the development of strategies to empower and strengthen farmer organizations and local governments. Experience in Nepal would be an advantage. Responsibilities will include but not limited to the following;

- Review the project design relating to the institutions and develop a plan and framework to implement these under the project, including WRIDDs, AKCs local level government agencies, WUAs and the new WUCs.
- Review the proposals to develop a new and modernized approach to Crop and Water Management (ICWM); focusing on the institutional parts develop an outline of the guidelines for sustainable OM of the irrigation infrastructure, empowered farmer organizations, integrated crop and water management, institutional support for the development of agri-enterprises and enhanced access to finance.
- In coordination with the other individual and PIMS specialists develop the institutional guidelines relating to ICWM and prepare training modules to strengthen the institutions.
- Support the PIMS consultants with the introduction of the ICWM institutional guidelines, monitor and review the progress and adjust the guidelines as required.
- Based on field level consultations prepare a plan and strategy to introduce the new WUCs on a pilot basis in 20 subprojects. Based on feedback from the WUAs and other stakeholders define the key role of the new WUCs to support irrigation management and agribusiness functions.
- Assess the role of new WUC and its functions and how it relates to the WUA. Develop the institutional implementation plan to pilot WUCs for each of the different types of schemes Hill Lift, Hill and Terai FMIS and Rajapur.
- Develop the constitution and rules for the new WUC to comply with cooperatives act.

- Set out the processes to; (i) adequately brief the farmers on the possible opportunities to establish a WUC; (ii) provide support for the decision-making process, whether or not they want to proceed with establishing a WUC; and (iv) define the approach and steps for applying and registration with the cooperatives office and local government.
- Define the role of the WRIDDs in strengthening the WUAs and if applicable. to support the registration and processes to establish the WUCs. Define the role of the AKCs to develop the WUC agribusiness functions.
- Examine the how digital advisory services can support the program for institutional development under the project. Working with other consultants prepare material related to institutional development.
- Working closely with the national institutions' consultants and from the lesson learnt under the project prepare the institutional for new guidelines for ICWM including management and extension support and institutional parts of the road map for the long-term strategy for investment and management of the FMIS schemes in Nepal,
- Set out the requirements and responsibilities within the consultancy team to prepare the parallel training modules which will be used to support the project programs as well as future training of irrigation and agriculture extension workers in Nepal.
- Prepare overall recommendations on the institutional program under the project.

### **International Digital Communications Specialist (3.0 person-months)**

5. The International Digital Communications Specialist will provide the specialist expertise to establish digital advisory services to provide cost effective access to disbursed and remote irrigated agriculture areas and stakeholders. The specialist will work closely with the PIMS team including the Communications specialist. The expert must have a university degree in communication, information technology or related field and must have at least 12 years of proven work experience in creating digital technologies for use by private sector and governments. Must have worked in design of 'user experience' in social media incorporating human-centered design thinking. The expert should demonstrate experience of working with agricultural and rural communities. Experience in Nepal would be an advantage. Responsibilities will include but not limited to the following.

- To plan and develop a viable and sustainable system to communicate relevant and actionable irrigation, agriculture, and climate information to farmers, WUAs, WUCs and other stakeholders through SMS apps and videos.
- Conduct surveys and focus groups to understand what social media or networks farmers are already engaging with. Assess strengths and weakness, needs, preferences and challenges when engaging with said network.
- Prepare a digital communications strategy and plan to be developed by the project, the plan needs to incorporate digital communications fit with the current institutional framework of the central and devolved government agencies. The plan will also incorporate a strategy of long-term financing including revenue generation including sponsored content, in-app advertising, and premium feature to ensure sustainability.
- Working with project implementation agencies and PIMS pilot the digital advisory services in around 20 selected sub projects with a special focus on the hill lift sub-projects. The
- Prepare an assessment of the pilots after 12 months of operation. The assessment

- must focus on the user experience and value added.
- Review and adjust the plan based on lessons learnt in pilots and expand the advisory to other sub-projects and other districts as per requirements.

### **International Finance and Credit Specialist (2 p-m)**

6. The International Finance and Credit Specialist will review the current financing situation for irrigation and agriculture including government, financing institutions and will support the development of guidelines for innovative approaches to provide enhanced access to rural finance. The specialist will have an advanced degree in finance or equivalent and not less than 20 years in the planning a design of rural finance systems including not less than 15 years on provision of finance for farmers and small enterprises through subsidies and credit. Relevant experience in Asia is essential, experience in Nepal will be an advantage. Responsibilities will include but not limited to the following.

- Review related programs in Nepal for rural finance for irrigation and agriculture, identify key lessons learnt for financing irrigation and agriculture in Nepal. Identify case studies of innovative financing initiatives that can potentially be incorporated into the IMEP to support farmers, farmer groups WUA and the WUCs to raise finance support.
- Working with a sample of banks and leader farmers develop the guidelines for a more transparent, simplified, and integrated approach for lending to farmers and the WUA and WUC. From the consultations develop a rational risk-based pricing policy to provide the right incentives for borrowers and lenders to participate
- Work closely with the Department of Agriculture and Ministries of Agriculture and Finance to obtain the necessary support or the program.
- From the review develop a pilot program for enhanced access to rural finance that can be implemented in selected subprojects. The program will involve the local government, financing agencies, WUA/WUCs and farmers. Prepare training material to support the program.
- Identify the key risks of finance and credit program to ensure sufficient safeguards are built into the project activities.
- Working with the national specialists and the relevant government agencies prepare the guidelines for partial subsidy programs under the project including the mechanisms for applications, approvals and disbursement of funds and the necessary monitoring systems.
- Develop guidelines to strengthen and enhance access to finance for farmers and the WUA and WUCs.

### **National Individual Consultants**

#### **Institutions and Cooperatives Specialist (8 p-m)**

7. The National Institutions and Cooperatives Specialist will provide the key support to establish operationalise new Water Use Cooperatives (WUCs) who will have the combined responsibilities and functions of irrigation management and agribusiness, The specialist will have an advanced degree in agriculture or business management, rural institutions or equivalent. The specialist will have not less than 20 years' experience in establishing and developing successful agriculture cooperatives in Nepal. Evidence of hands-on experience to establish financially viable and dynamic cooperatives needs to be demonstrated. Responsibilities will include but not limited to the following.,

- Engage with a sample of WUAs and WUCs that have been established to obtain feedback.
- Prepare case studies of successful agriculture cooperatives in Nepal that can provide examples for the WUCs.
- Refine and develop the model for the WUC prepare the details of the WUC including the constitution, registration processes and operation modality.
- Review the current policies and responsibilities for the WUA and define how the WUA and WUC can best operate to combine the functions of irrigation management and agribusiness with the objectives of improved agriculture productivity and climate resilience.
- To plan the program to pilot the establishment 20 WUCs focusing on the hill lift schemes.
- To work with the PIMS and project offices to establish and operationalize the 20 WUCs, monitor progress.
- Based on the lessons learnt from the pilots set out the framework and design to upscale the establishment of WUCs to other sub-projects.
- Develop guidelines for the development of WUCs to be used by the project and other FMIS programs in Nepal.

#### **1. National Finance Specialist (6 p-m)**

8. The National Finance Specialist will work closely with the International Finance and Credit specialist and the PIMS team to provide key support the planning design and start up activities for the programs for enhanced rural finance under the project. The specialist will have an advanced degree in finance or equivalent and not less than 20 years in the planning a design of rural finance systems including not less than 15 years on provision of finance for farmers and small enterprises through subsidies and credit. The specialist ideally will have held a senior position in government with extensive knowledge of the government procedures for finance and credit as well as the banking sector. Responsibilities will include but not limited to the following.

- Review related programs in Nepal for rural finance for irrigation and agriculture, identify key lessons learnt including successes and failures.
- Liaise with the related programs under ADB including NAFHA and the Rural Enterprise and Financing Project to assess how lessons learnt, and approaches could be incorporated into IMEP.
- Review the proposed finance support packages under the project for farmers and propose refinements based on experiences and lessons learnt in Nepal and elsewhere.
- Identify the key risks of the finance and credit program to ensure sufficient safeguards are built into the project activities.
- Support the implementation of the pilot program to improve access to rural finance including development of training materials.
- Work closely with the Department of Agriculture and Ministries of Agriculture and Finance to develop new and acceptable approaches to rural finance.
- Working with the national specialists and the relevant government agencies prepare the detailed design for partial subsidy and credit program under the project including the mechanisms for applications, approvals and disbursement of funds and the necessary monitoring systems.
- Prepare guidelines to improve the processes of support grants, subsidies and the credit finance mechanisms that can be adopted. Provide training to the key responsible agencies and the relevant members of the PIMS team.

## **Independent Safeguards Specialist Land Donation (0.5 p-m)**

9. A Third Party Independent Safeguards Specialist will be engaged by the Department of Water Resources and Irrigation (DWRI) to verify the process of land donation. The Independent Third-Party is not associated with IMEP - past and present, in any capacity. This intermittent assignment is required by DWRI under the IMEP for an initial amount of approximately 10 man-days to be rendered over a period of 3 months. During the assignment, the Independent Third-Party will have to travel to the project villages and coordinate with DWRI. The performance of the Independent Third-Party shall be subject to periodical review. The tasks will include but not limited to the following

- Review the project documents such as the Resettlement Framework, Indigenous Peoples Plan, Resettlement Plan, specifically the correspondences related to the project's land donation.
- Ensure that voluntary donation is in fact voluntary through verbal and written record, with photos and minutes of the meetings with the concerned parties.
- Ensure that voluntary donations do not severely affect the living standards of affected people and are linked directly benefits for the affected people.
- Ensure there is no coercion involved in the process of land donation.
- Ensure that the preferences and concerns of the landowner/donor related to access, selection of site within lands held are recorded and any stipulated conditions met.
- Ensure that the land donation agreement and certificate is drafted in a fair and transparent manner.
- Identify and recommend mitigation measures to landowner/donor, affected third party, if required.
- Ensure that taxes, stamp duties and registration fees for purchased / donated land are borne by government.
- Submit a report and signed certificate as witness to land use donation and transfer process.

## **2. Unallocated as required 17.5 p-m.**

10. Seventeen and a half p-m of national unallocated consultancy are proposed, these consultants will be mobilised as required during the project period. The requirements and the type of consultants will be decided by the head of CPMO and CAMO. The consultants could include additional financial management consultants to review accounting systems as required.

## **APPENDIX 10: ENVIRONMENTAL MONITORING REPORT OUTLINE**

The PMU is required to prepare semi-annual monitoring reports that describe progress on implementation of the project EMP and compliance issues and corrective actions (if needed). A sample outline which can be adapted as necessary is provided below.

### **I. Introduction**

- A. Overall Project Description and Components
- B. Location of the Subproject (use maps and pictures)
- C. Environmental Category (discuss categorization based on ADB SPS and national law)
- D. Project Implementation Progress (summary of activities and construction progress and main civil works during reporting period)

### **II. Institutional Arrangement for Environmental Safeguards**

- A. Institutional Arrangement (description of the project institutional arrangement as a whole; use figure/framework)
- B. Environmental Safeguard Staff/Personnel

### **III. Statutory Environmental Requirements**

- A. Government Policy Compliance (discuss status of clearance/s, permit/s, etc. and compliance of the project; include all permits and clearances as appendices)
- B. Compliance Issues (indicate any non-compliance on national/state and reason of non-compliance)

### **IV. Loan/Grant Covenants**

### **V. New Schemes and/or Construction Progress**

### **VI. Implementation of Environmental Management Plan**

- A. Summary of Inspection Activities
- B. Compliance with Construction Environmental Management Plans (CEMPs).
- C. CEMP implementation issues

### **VII. Summary of Environmental Monitoring**

- A. Environmental Monitoring Plan (emission and ambient)
  - 1. Summary of Monitoring
  - 2. Results
  - 3. Assessment
- B. Other Monitoring Program (if relevant)
  - 1. Summary of Monitoring
  - 2. Results
  - 3. Assessment

**VIII. Information Disclosure and Consultations (only applicable if any consultations are performed during reporting period)**

**IX. Grievance Redress Mechanism (GRM)**

- A. GRM Framework, members and access
- B. Grievances Received (if any)
- C. Status of Current Grievances (if any)

**X. Conclusion**

- A. Overall Progress of Implementation of Environmental Management Measures
- B. Unanticipated Environmental Risks and Impacts
- C. Corrective Action Plan (footnote 1)

**XI. Annexes (as appropriate)**

- Copies of ambient and/or emission monitoring results
- Clearances and permits
- Photographs
- Other

# APPENDIX 11: TEMPLATE ON SEMI-ANNUAL ENVIRONMENTAL COMPLIANCE MONITORING REPORT

## TABLE OF CONTENTS

### EXECUTIVE SUMMARY

Acronyms and Abbreviations

#### 1.0 INTRODUCTION

- 1.1 Background
- 1.2 Project Scope and Salient Feature (with location map)
- 1.3 Overall Project Progress Status
- 1.4 Consultant and Contractor

#### 2.0 SAFEGUARD PROVISIONS

- 2.1 Safeguard Provisions in Bidding Document
- 2.2 Safeguard Provisions in Contract Agreement

#### 3.0 STATUS OF ENVIRONMENTAL ASSESSMENTS

- 3.1 Requirements in PAM
- 3.2 Status of Safeguard Documents of the Project (EIA/IEE/DDR)
- 3.3 Status of Safeguard Documents of Contractor (SEMP/OHS plan / Quarry Plan / Workers Code of Conduct etc.)

#### 4.0 INSTITUTIONAL ARRANGEMENT

- 4.1 Requirements in PAM
- 4.2 Safeguard Unit and Staffing in the Project

##### *4.1.1 Safeguard Unit/Desk (add an organization chart)*

- *Organizational Mechanism (with line of reporting with chart)*
- *Safeguard Focal Person*
- *Safeguard Staff of Consultant*
- *Safeguard Staff of Contractor*
- *Field visit by the experts*

##### *4.1.2 Record of Safeguard Unit/Desk Meetings*

- *Meeting with Safeguard Staff*
- *Meeting with Technical Staff*

- 4.3 Institutional Arrangement for Health Safety
- 4.4 Safeguard Compliance Mechanism in the Project
- 4.5 Safeguard and OHS Training for Environment and Social Safeguard Staff

#### 5.0 STATUS OF LOAN COVENANT

(add a table in main text only for safeguard related covenant)

#### 6.0 GOVERNMENT CLEARANCE

(EIA/IEE, tree clearance, camp location, quarry/borrows, batching plant, spoil disposal, shifting of electricity poles, relocating public utilities & services, solid waste management agreement with municipality etc.)

## **7.0 GRIEVANCE REDRESS MECHANISM**

- 7.1 GRM Established
- 7.2 Information to Stakeholders about GRM in the Project
- 7.3 Status of Grievances

## **8.0 IMPACTS AND COMPLIANCE WITH ENVIRONMENTAL SAFEGUARD MEASURES**

(Follow SEMP and OHS Plan. Attach SEM and OHS Matrix with a column on actual status and recommended action plan. All information shall be quantified and presented in table/chart/graph etc.)

- 8.1 Physical Environment
  - 8.1.1 *Topsoil Recovery and Use*
  - 8.1.2 *Spoil Management*
  - 8.1.3 *Drainage Management*
  - 8.1.4 *Slope Instability and Management*
  - 8.1.5 *Quarry Area Management*
  - 8.1.6 *Crusher and Batching Plants Management*
  - 8.1.7 *Air/water/dust Pollution and Noise Level*
  - 8.1.8 *Solid Waste Management*
  - 8.1.9 *Sedimentation*
  - 8.1.10 *Material Storage Yards and Workshop*
  - 8.1.11 *Carbon Footprint and Management*
  
- 8.2 Biological Environment
  - 8.2.1 *Tree Cutting*
  - 8.2.2 *Impact on Ecologically Sensitive Area*
  - 8.2.3 *Loss of Habitat*
  - 8.2.4 *Impact on Terrestrial, Avian and Aquatic Biodiversity*
  - 8.2.5 *Use of Firewood*
  - 8.2.6 *Non timber forest product*
  - 8.2.7 *Hunting & poaching*
  
- 8.3 Socio-economic and Cultural Environment
  - 8.3.1 *Loss of Land and Property*
  - 8.3.2 *Damage to Community Infrastructure*
  - 8.3.3 *Water Supply to the camps*
  - 8.3.4 *Disruption to Supply and Business Loss*
  - 8.3.5 *Workers' Camp and Facilities*
  - 8.3.6 *Community Stress and Crime*
  - 8.3.7 *Livelihood Restoration and Enhancement*
  - 8.3.8 *Emergency response and disaster preparedness (both workers and community)*
  - 8.3.9 *Impact on Cultural/Festival Grounds, Cemetery, Religious Procession etc.*
  - 8.3.10 *Disturbance to hospital and school*
  - 8.3.11 *Disturbance to vehicle or pedestrian movement*

## **9.0 OCCUPATIONAL HEALTH AND SAFETY**

- 9.1 Labor Camp and Facilities
- 9.2 Project Health & Safety Management Plan and Institutional Arrangement
- 9.3 Project High Risk Activities Control Measures (as applicable in the project)
  - 9.2.1 *Working at Height*

- 9.2.2 *Excavation and Trench Safety*
- 9.2.3 *Confined Space Safety*
- 9.2.4 *Lifting Operation*
- 9.2.5 *Working in Landslide/Flood Area*
- 9.2.6 *Working at Potential Area of Electrical Shock*
- 9.2.7 *Working at Potential Area of Fire Hazard*
- 9.2.8 *Preparation for Chemical/Fuel Spillage*
- 9.2.9 *Protocol for Material Handling*
- 9.2.10 *Plan for Good Housekeeping*

- 9.4 Emergency Preparedness (medical room in camp); first aid box in work sites and camp, emergency protocol, mock drill, assembly point, fire extinguisher etc.
- 9.5 Workers welfare facilities (rest shelter, drinking water, toilets)
- 9.6 Work Implementation Protocol (daily work clearance by engineer, presence of site engineers, health worker, first aid facility, emergency evacuation facility etc. at standby)
- 9.7 OHS training and tool box talk records
- 9.8 Personal Protective Equipment
- 9.9 Reporting and Recording of incident and Accidents
- 9.10 Vector Proliferation and Communicable Disease
- 9.11 COVID-19 and Other Communicable Disease
- 9.12 HIV/AIDS Management

## **10.0 IMPLEMENTATION OF MITIGATION MEASURES**

- 10.1 Slope Protection/ Bioengineering Measures/Nature Based Solutions
- 10.2 Compensatory Plantation
- 10.3 Biodiversity Conservation Activities
- 10.4 Trainings
- 10.5 Awareness Program
- 10.6 Others as per EMP

## **10.0 VEGETATIVE METHOD OF SLOPE PROTECTION (BIO-ENGINEERING)- As Applicable**

## **11.0 BIODIVERSITY CONSERVATION PLAN/PROGRAM As Applicable**

## **12.0 ACCIDENT REPORT**

## **13.0 STAKEHOLDER CONSULTATION AND TRAINING**

- 13.1 Communication and Consultation
- 13.2 Capacity Building Activities

## **14.0 COMPLIANCE TO ACTIONS AGREED IN PREVIOUS REPORTS**

- 14.1 Status of Action Plan in Last Aide Memoire
- 14.2 Status of Action Plan Recommended in the Last SEMR

## **15.0 ISSUES AND CHALLENGES**

## **16.0 RECOMMENDATION AND FOLLOW UP ACTION PLAN**

## **17.0 CONCLUSION**

## **LIST OF FIGURES**

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## **ATTACHMENTS**

### **PHOTOGRAPHS**

Annex-1:	Regulatory Compliance Requirements
Annex-2:	Environmental Compliances Status with Loan and Grant Covenants
Annex-3:	Compliance to the terms of General Conditions of Contract Clauses
Annex-4:	Compliance to the terms of Special Conditions of Contract Clauses
Annex-5:	Environmental Safeguard Plan
Annex-6:	Safety Facilities Available to Labors
Annex-7:	Status of EMP/SEMP/CEMP Compliance (matrix with status and recommendation)
Annex-8:	Status of OHS Plan Compliance (as per the Contractor's Plan)
Annex-9:	Air/Water/Noise Monitoring
Annex-10:	Tree Cutting Status
Annex-11:	Grievance List
Annex-12:	Injury/Accident Report
Annex-13:	List of Wildlife Kill
Annex-14:	Sample Monitoring Checklist



## APPENDIX 13: INDIGENOUS PEOPLES CHECKLIST

### A. Introduction

1. Each scheme needs to be screened for any indigenous peoples impacts which will occur or have already occurred. This screening determines the necessary action to be taken by the project team.

### B. Information about the Scheme:

a. District/administrative name: \_\_\_\_\_

b. Location (km): \_\_\_\_\_

c. Civil work dates (proposed): \_\_\_\_\_

d. Technical description: \_\_\_\_\_

### C. Screening Questions for Indigenous Peoples Impact

2. Below is the initial screening for indigenous peoples impacts and due diligence exercise. Both permanent and temporary impacts must be considered and reported in the screening process.

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
<b>A. Indigenous Peoples Identification</b>				
1. Are there socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the project area?				
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?				
3. Do such groups self-identify as being part of a distinct social and cultural group?				
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?				
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?				
6. Do such groups speak a distinct language or dialect?				

<p style="text-align: center;"><b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)</p>	<p style="text-align: center;"><b>YES</b></p>	<p style="text-align: center;"><b>NO</b></p>	<p style="text-align: center;"><b>NOT KNOWN</b></p>	<p style="text-align: center;"><b>Remarks</b></p>
<p>7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?</p>				
<p>8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?</p>				
<p><b>B. Identification of Potential Impacts</b></p>				
<p>9. Will the project directly or indirectly benefit or target Indigenous Peoples?</p>				
<p>10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)</p>				
<p>11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)</p>				
<p>12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?</p>				
<p><b>C. Identification of Special Requirements</b> <i>Will the project activities include:</i></p>				
<p>13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?</p>				
<p>14. Physical displacement from traditional or customary lands?</p>				
<p>15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?</p>				
<p>16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?</p>				

<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)	<b>YES</b>	<b>NO</b>	<b>NOT KNOWN</b>	<b>Remarks</b>
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?				

**D. Anticipated project impacts on Indigenous Peoples**

<b>Project component/ activity/ output</b>	<b>Anticipated positive effect</b>	<b>Anticipated negative effect</b>

## APPENDIX 14: PROJECT IMPLEMENTATION PROCEDURE

### 1. SUBPROJECT SELECTION CRITERIA

#### A. Request for Assistance

- (1) Proposed FMIS subprojects are between 10 and 500 ha in the hills, and 100 and 2,000 ha in the Terai. [data source: *WUA Request for Assistance Form*]
- (2) Proposed subprojects entail rehabilitating or upgrading an existing irrigation scheme, and may include new supplementary structures and canals in existing systems. [*WUA Request for Assistance Form*]
- (3) More than 70% of the beneficiary households have signed off on the subproject Request for Assistance Form. [*WUA Request for Assistance Form*]
- (4) WUA has provided up-front cash contribution of at least NPR 50 per hectare of command area, and established an emergency fund for nonrecurrent maintenance works with the said contribution. [*WUA Request for Assistance Form*]
- (5) Farmers are willing to develop field channels and water distribution systems for improved on-farm water management under ICWM. [*WUA Request for Assistance Form*]
- (6) Farmers are willing to adopt improved and equitable water distribution schedules as applicable based on water availability and cropping pattern. [*WUA Request for Assistance Form*]

#### B. Initial Scheme Prioritization (Scoring) - before Scheme Verification

- (7) Proposed subprojects which never received external assistance will be given highest priority. [*DWRI records*]
- (8) The subproject did not have any major investment or rehabilitation within the last 15 years. [*DWRI records*]
- (9) Subprojects where farmers and their ad hoc management committee were active and carried out satisfactory O&M activities during the previous years will be given higher priority. [*WUA Request for Assistance Form*]

#### C. Final Scheme Prioritization (Scoring) - after Scheme Verification

- (1) If the subproject did receive investment or rehabilitation (more than 15 years ago), check if the present request is due to deferred maintenance (lower priority) or to events beyond the ability of the farmers (highest priority). [*Scheme Verification*]
- (2) Subproject with the largest area (or largest % of command area) that can be converted from rainfed or suboptimal irrigation to round the year irrigation in full command area will be given higher priority. [*Scheme Verification*]
- (3) Subprojects having prospects for promoting year-round irrigation will be accorded higher priority.<sup>[1]</sup> [*Scheme Verification*]
- (4) Subprojects having a good potential to form an effective WUA will be accorded higher priority after assessing water right conflict, water distribution, social conflict and highly interested farmers with leadership. [*Scheme Verification*]
- (5) At least 40% households in the subproject area must have landholdings less than 0.5 ha in the hills and 1.0 ha in the terai. [*Scheme Verification*]

D. SPPR Criteria

- (1) The subproject must be technically feasible, financially and economically viable with economic internal rate of return (EIRR) of at least 12%. [SPPR]
- (2) The subproject will not have any adverse environmental impact of major scale and significance that require environmental impact assessment study, including any negative impact on other users of the same source. Initial environmental examination (IEE) is undertaken and approved after consulting the beneficiaries and those affected by the project, concluding that the subproject is environmentally sound and any adverse impacts can be mitigated. A brief IEE shall be part of all ISP contracts. [SPPR]
- (3) Community is willing to voluntarily donate land required for ISP rehabilitation. Due diligence documentation shall include an *IR Screening Checklist* and a *Voluntary Land Donation Form* and attached with in the SPPR of each of the ISPs. [SPPR]
- (4) WUA are willing to contribute part of the subproject rehabilitation costs . In any case, the WUA contribution should not be less than 3% of the civil works [SPPR].

## 2. PROPOSED FMIS SUBPROJECT PROCEDURES AND IMPLEMENTATION ARRANGEMENTS

A. Stage 1: Subproject Identification, Scheme Verification, and SPPR Preparation

- (1) **Information Campaign.** The WRIDD shall plan extensive information campaign. The purpose of the Information Campaign is to make the project widely known by the farmers throughout the project area, reaching the most remote locations that may need assistance for irrigation rehabilitation. If additional subprojects are needed, apart from those already being processed<sup>[2]</sup>, CPMO will advise WRIDDs to initiate a new information campaign by informing to all local water user associations/ groups within the local level to initiate process to obtain project assistance. CPMO will prepare information posters and distribute to WRIDDs for display at the local level offices. WRIDDs will radio advertisements in this regard through printed, audio-visuals, FM radios etc. in the project area.
- (2) **WUA Request/ Application.** On the basis of the information received, interested water user associations/ groups will form an ad-hoc WUA committee (including representatives from head to tail reaches, women, and ethnic minorities, if any) and request FMIS rehabilitation to the concerned WRIDDs with recommendation of the concerned local level. The request will include a brief scope of the proposed rehabilitation works along with the necessary agriculture support services in a prescribed **Request for Assistance Form**. At this time, the WUA will also submit an upfront deposit at the rate of NPR 50 per ha.
- (3) **Pre-Screening.** The WRIDD will review the farmers application for completeness and adequacy, including the information on size of the command area and access. Requests that do not meet the selection criteria or will be considered incomplete and will be returned back to the farmers asking for additional information.
- (4) **Initial Prioritization.** The WRIDD will score the application on a scale of 1 to 5, using selected criteria<sup>[2]</sup> and assigning a weight and score to each. The WRIDD will then select the top scoring subprojects for the next step of evaluation - scheme verification.

- (5) **Scheme Verification.** The objective of the scheme verification is to determine the technical needs, social viability and agriculture potential of the scheme for which a request has been received. A team from the concerned WRIDD will visit the proposed irrigation scheme to carry out a *preliminary assessment* of (i) water availability, (ii) present irrigation coverage, quality of irrigation service and condition of the existing infrastructure, (iii) indicative socio-economic situation in subproject area including ethnic composition of beneficiary group and distribution of landholdings; (iv) present cropping patterns; and (v) any need of voluntary land donation that might result from improvement or extension of the irrigation system. The details of the scheme verification process are presented in **Attachment A**.

The activities of the verification team will involve (i) a preliminary GPS survey of the existing main canal alignment including a preliminary alignment for possible canal extension, (ii) a GPS perimeter survey of the command area, and (iii) meetings to discuss the subproject concept and independent meetings with individual groups including women, ethnic minority, marginal farmers and landless people, and people outside the subproject area who might be adversely affected (downstream FMIS, for example).

WRIDDs personnel will enter the data collection from GPS survey and other field investigations in the *Scheme Identification System*<sup>[4]</sup>, which is a CMIASP-AF developed web-based MIS those records proposed subproject. **Scheme Verification Reports** can then be generated automatically by this system.

- (6) **Final Scheme Prioritization.** On the basis of the completed Scheme Verification Reports, the WRIDD will review the scheme prioritization exercise prepared earlier to reconfirm the original ranking. The final number of subprojects selected for a given district will follow the information shared by CPMO, which are based on the available budget<sup>[5]</sup>.

CPMO, with the assistance of the PIMS consultants, will review the prioritized subproject ranking and Scheme *Verification Reports*, which will be available on-line.

- (7) **GPS Joint Walkthrough Survey.** WRIDD staff will organize and carry out a joint walkthrough survey with the participation of WUA representatives to identify the system's details and problem areas. This group, together with a representative number of WUA members and farmers, will walk along the main canal and main branch canals and discuss problems and possible solutions. All problems identified during the walkthrough survey will be geo-referenced with a GPS and mapped with a description of the problem. In addition, photographic evidence of the major problems will be recorded. During the walkthrough, existing arrangements of water rights and water distribution within the system will also be discussed and recorded. Areas of reported water shortage will be geo-referenced and mapped. Details of the GPS Walkthrough Survey Methodology are presented in **Attachment B**.

The GPS joint walkthrough survey will record main and branch canal alignments, as well as conveyance or structural problems. Hydraulic boundaries of the system will also be recorded with the GPS equipment. The results of the surveys will permit the preparation of accurately geo-referenced mapping of system layouts, command area boundaries and system deficiencies. The Rapid Environmental Assessment (REA) checklist will be used to document environmental status of the subproject area, assess

the types and level of impacts, and use the information for environmental categorization of the subproject.

In parallel with the walkthrough, SMC staff will carry out other key technical, social and agriculture field investigations including (i) assessment of water availability, (ii) identification of other water uses and *users*, (iii) site investigations for major structures, (iv) present and future agriculture data, and (v) data on agriculture production cost, yields, agriculture income, other sources of income, etc. Focus group discussions (FGD) will be used to collect the relevant information.

- (8) **Subproject Preparation Report (SPPR).** The SPPR will be the outcome of the GPS joint walkthrough survey and social and agriculture investigations. The SPPR will include information on (i) subproject area (location, topography, present agriculture situation, socio-economic aspects, etc.), (ii) existing irrigation scheme and infrastructure (problems and constraints, WUA, etc.), (iii) proposed subproject (infrastructure development, agriculture development, cost estimates, etc.). The SPPR will also include appendices with maps, typical drawings, crop water requirements, brief IEE, voluntary land donation consent, EIRR/FIRR, and photographs.

WRIDDs personnel will prepare the SPPRs, using the fully automated, internet-based system developed by *CMIASP-AF*. They will enter the information from the GPS joint walkthrough survey, flow measurement, site investigation, socio-economic and agriculture data into the MIS. A standard template will be used to enter data. Once data entry is complete, SPPRs can be generated automatically. CPMO, with the assistance of PIMS consultants, will provide quality control of the SPPRs.

- (9) **Voluntary Land Donation.** The project will accept voluntary donation of land. Voluntary land donation will be considered only if land donation does not (i) bring any significant impact/impoverishment to the donor family and/or displace tenants/laborers/informal users; (ii) the land donor family does not come from the land owner categorized as poor or vulnerable; (iii) the donation will not cause any economic or physical displacement (to legal titleholders and/or formal or informal land users); (iv) explore ways for the land donor(s) to get direct benefits from the proposed project; (v) meaningful consultations are conducted with the land owner(s); and (vi) verify that the voluntary contribution is in fact voluntary and did not result from coercion or asymmetrical power relation between the land owner(s) and the government as confirmed through an independent third party.

WRIDDs will screen for voluntary land donation during Scheme Verification (or GPS Joint Walkthrough Survey) by completing the voluntary land donation screening checklist.<sup>[6]</sup> Where subproject improvement requires canal extension or widening, WRIDDs will document the voluntary land donation due diligence in each SPPR that requires donation of private land. They will ensure completion of the written consent form for land donation.<sup>[7]</sup> The donation will be verified by an independent third party to ensure that the land was voluntarily donated without any form of duress. The voluntary land donation due diligence information will be verified during scheme detailed design, and updated as necessary.

For most subprojects, additional land requirement for improvement of existing canals would be minimal and acquired through voluntary donation. The canal layout will be super-imposed on the cadastral map to identify the landholdings along the existing main

and branch canals.

The subproject selection criteria will verify that the rehabilitation of an existing irrigation system is demand-led, and that members agree to voluntarily donate small parcels of their land (up to 10% of their agricultural land-holding in the command area) for irrigation enhancement. To address issues of coercion for donation of land, and for donation of land that exceeds 10% of agricultural land within the command area, the provisions of the grievance redress mechanism included in the Resettlement Framework (RF) will be followed.

- (10) **Indigenous Peoples.** An Indigenous Peoples screening due diligence will be carried out following the Indigenous Peoples screening checklist. In particular, the Indigenous Peoples impact screening checklist will be used for each ISP during Scheme Verification (or GPS Joint Walkthrough Survey) to screen for adverse impacts, the subproject not fulfilling the screening criteria will be dropped.
- (11) **Environmental Assessment.** For each ISP, the WRIDD will prepare an **Initial Environmental Examination (IEE)**. The IEE will also include an **environmental management plan (EMP)** for implementation and monitoring of the proposed mitigation measures. The IEE and the EMP will be prepared as a part of the SPPR, on the basis of the findings of the Rapid Environmental Assessment (REA) checklist filled up during the GPS Joint Walkthrough Survey.
- (12) **EIRR and FIRR.** The WRIDDs will prepare the cost-benefit analysis using an application that incorporates (i) subproject costs and annual phasing, (ii) without and with rehabilitation cropping patterns, and (iii) economic without and with rehabilitation crop gross margins applied to subproject cropping patterns. The results will be incorporated in the subproject's automated SPPR system.

For each subproject, a summary of the SPPR will be prepared by WRIDDs in Nepali as an appendix to the SPPR. It will include summaries of (i) Infrastructure Development Plan, (ii) Water Users' Association Development Plan, with details of assistance through the Junior Extension Technician /Social Mobilizers (JET/SM) of WRIDDs/AKCs (PIMS consultant) and Community Organizers (Cos), training programs and other activities, (iii) Agriculture Development Plan (ADP), (iv) Implementation Schedule, (v) voluntary land donation requirement and (vi) EMP.

- (13) **Approval for Implementation.** The implementation approval process will follow the standard form that has been developed for this purpose, involving (i) a checklist for appraising SPPRs submitted by WRIDD/SMC to CPMO along with the report (signed by WRIDD Chief, and AKC representative, WUA Chair, (ii) a submission by the SMC (signed by WRIDD Chief), (iii) a final approval by the Project **Appraisal Committee (PAC)** (signed by DWRI DG, DOA DG, DWRI DDGs, PIMS TL or DTL), and the representatives from the concerned provincial Ministry.

B. Stage 2: WUA Institutional Development and Detailed Design

- (1) **Institutional Development.** After PAC approval, the establishment of WUAs under the current legal framework will be initiated, along with WUA strengthening in accordance with the SPPR's institutional development plan. Each WUA will nominate a qualified community Mobilizer (CM), from amongst its members, who will be contracted by

WRIDD to facilitate WUA in various project related programs, networking with WRIDDs/AKCs/ training facilitation, data collection etc. with support from the PIMS consultant. The JTE/CMs will work closely with the Association Organizers (AOs) of WRIDD in providing motivation and farmers mobilization. The AOs' capacity will be strengthened through the training by PIMS consultants and others.

The JTE/CM will start with an *information campaign*<sup>81</sup> for the stakeholders. The inventory of beneficiary households inside the subproject area will be updated. In this process, direct beneficiaries and other relevant stakeholder including share-croppers, landless farmers will be identified, and a complete list of beneficiaries in the command area will be established. Further comprehensive socio-economic baselines will be collected with support from PIMS. Existing **Farmers Groups** inside the command area will be invited to join the WUA. The **ad-hoc Management Committee** will be modified as necessary, to promote appropriate representation of various stakeholder groups within the subproject area and representatives from the tail end of the system. PIMS will provide technical assistance to WUAs willing to transform into Water User Cooperatives (WUCs)

Subsequently, the ad-hoc WUA Management Committee will prepare, with help from the JTE/CM and PIMS, draft WUA constitution, by-laws, and rules and regulations that define the organizational setup, and operational arrangements and procedures. They will also (i) organize general meetings; (ii) enroll members (iii) discuss and finalize beneficiary contribution arrangements for investment and O&M; (iv) organize the first WUA general assembly; (v) apply for registration; and (vi) conduct an election within the specified time frame. The WUA will also elect a manager/treasurer, and conduct regular meetings to review and promote the progress of WUA establishment and strengthening activities with the presence of the JET/CM, WRIDD, AKC and PIMS.

Particularly in larger schemes, the JET/SM will facilitate the formation of branch canal, and field channel groups as units, as applicable, to receive on-farm water management and agriculture extension and support services. These groups will be encouraged to have at least 33% of women and DAG as members, and motivated to build and manage field channels to improve intra-unit irrigation efficiency.

- (2) **Participatory Detailed Design.** During this stage, WRIDD will collect data for detailed design of the engineering works, and prepare the design itself through a consultative process with the farmers, including joint walkthrough. They will also prepare the detailed cost estimates and tender documents along with the detailed design.

The consultative process with the farmers will involve the following main elements: (i) their participation in the scheme verification visit, during which they will have the opportunity to present problems and their proposed solutions, (ii) the joint GPS walkthrough, during which a representative number of WUA men and women farmers and sharecroppers will walk along the canal system and discuss problems and possible solutions, (iii) their review and approval (by signature) of the summary of the SPPR that describes the proposed structures and the support that they agree to receive, and (iv) their participation in data collection for detailed design. If the detailed design process leads to changes to the structures, these will be discussed with the WUA.

The detailed designs will be prepared by the WRIDDs, with quality control by relevant Provincial Ministry with support from the PIMS consultants and approval from the

concerned authority.

The WRIDDs will compute the beneficiary contribution following the requirements of the Irrigation Policy. The WUA will contribute part of the subproject rehabilitation costs, in cash or in kind, as defined in the Irrigation Policy. If the WRIDD finds the beneficiary contribution to be less than 3% of the total subproject cost, the WRIDD will then raise the beneficiary contribution up to 3%.

At this time, a list of direct beneficiaries, their landholding size and how much each will contribute in cash, kind, or labor will be prepared, through facilitation by the JET/CM and the PIMS. The contribution for each beneficiary will be based on their landholding size.

During detailed design, if modifications are needed to the infrastructure described in the SPPR, the WRIDD will verify the **consent form for land donation** prepared earlier (if one was prepared) and update or prepare one following the RF, under supervision and guidance from PIMS consultants.

- (3) **Signing Memorandum of Agreement (MOA).** Stage 2 of the subproject development cycle ends with the signature of the Memorandum of Agreement (MOA) for subproject implementation, which sets out specific subproject activities, schedules, and institutional responsibilities. The MOA will be signed by the Chairman of the WUA Executive Committee, the WRIDD Chief and the Chief of AKC. The agreement will be signed only after the following preconditions have been met and confirmed by the WRIDD.
- a. Membership enrolment in the WUA includes representation from a minimum of 70% of the direct beneficiary households in each geographical group representing head, middle, and tail reaches of the system.
  - b. The WUA has finalized its constitution and by-laws, has been registered in the concerned WRIDD or local government, and has undertaken election of the executive committee. At least 33% of the Executive Committee members are women, DAG representation and other reflecting the demographic feature of beneficiary population. One third of the executive member are from the tail end of the system.
  - c. The engineering designs, beneficiary contribution works and arrangements have been discussed with WUA and endorsed.
  - d. The WUA has collected the initial upfront cash contribution amounting to 0.5% of the total cost estimate for irrigation infrastructure and has deposited it into the joint account of WUA and WRIDD.
  - e. The WUA has demonstrated, through its records, that it has conducted regular meetings and that the WUA Executive Committee has met monthly for at least 4 months prior to the signing of the MOA.
- (4) **Assessment of WUA capacity for civil works implementation.** WUAs may participate in earthworks and simple structures up to a value of NPR 4 million each, either through (i) provision of materials and labor under supervision of designated Sub-Engineers or (ii) direct contracting with WUAs where appropriate capacity has been demonstrated. The WRIDD engineers need to review the capacity of WUAs to perform civil works. The PAM includes a table that describes works too complex for WUA procurement. The WRIDD engineers assess the WUA capacity and willingness to

perform simple civil works through payable contracts at this stage.

- (5) **Progress Review Meetings.** WRIDD/SMU will organize regular progress review meetings at the subproject sites or district headquarters to review implementation progress and further decide on the activities, schedules, and responsibilities of the concerned organizations. A register shall be maintained to record agenda and agreements reached in the review meetings.

The WUA will form a subproject **Construction Monitoring Committee (CMC)** who will be trained by WRIDD and PIMS, on construction quality and reporting arrangements.<sup>[9]</sup> Representatives of CMC will participate in SMC-WUA progress review meetings along with other key WUA executive members. Record of all such meetings shall be maintained.

C. Stage 3: Approval of Detailed Design, Tendering, and Construction

- (1) **Approval of Detailed Design.** After MOA signing, WRIDD will submit the detailed design to relevant authority along with a copy of the signed MOA. The designs and cost estimates will be approved by the relevant authority after verification by PIMS consultant. These will also be sent to CPMO for their “no objection.”
- (2) **Initiation of WUA Contribution Works.**<sup>[10]</sup> The WRIDD and JET/CM, with support from the PIMS, will motivate the WUA to initiate the works<sup>[11]</sup> stipulated as beneficiary contribution in the MOA, with technical support and regular monitoring by the Engineer and/or Sub-Engineer designated by WRIDD to ensure work standards and quality. The JET/SM will facilitate labor mobilization with occasional supervision by PIMS. Upon 30% completion of the WUA contribution works, WRIDD and the Quality Control Engineer from the PIMS consultants will visit the works and confirm their progress and quality. The remaining 70% of the WUA contribution works must be completed by the time 75% of the Project-financed civil works has been completed.
- (3) **Tendering, Contract Signing, and Work Initiation.** Upon confirmation of reasonable progress of the WUA contribution works, approval of tenders for the project-financed civil works will be initiated by WRIDD. Contractors will be invited for the construction of subproject infrastructure.

When possible, the WUA will engage people from disadvantaged groups (DAG) to undertake WUA works, using the current approved district wage rates, and ensuring equal pay for male and female workers for equal work output. The concerned WRIDD and WUAs will also promote DAG engagement in work done by contractors.

- (4) **Construction and Monitoring.** The WUA will be involved in monitoring construction done by contractors. For this purpose, the CPMO and WRIDD with the assistance of PIMS consultants will organize training for the subproject Construction Monitoring Committee (CMC)<sup>[12]</sup>. The WUA management committee members will not be allowed to work as contractors in any construction works under the subproject. The WRIDD will issue instructions to the contractor giving CMC members the right to lodge written complaints to WRIDD/SMC.

WRIDD will mobilize a Site Sub-Engineer either from within or recruit and train a local agent, to supervise the work on a daily basis. Contractor will maintain work records including photographs at key stages for periodic review by the construction

supervisors<sup>[13]</sup>. A copy of the construction drawings will be explained to the WUA, and if any major changes occur during construction, a copy of the revised drawings will also be explained to them.

- (5) **Test Run and Rectification.** Upon confirmation of civil works completion in accordance with the plan, test runs will be undertaken in the presence of WUA CMC members and WRIDD. Particular attention will be given to verifying the design flow at key canal locations, including the tail end and extended irrigated area. Deficiencies will be noted and rectified by the contractors or by WRIDD, depending on the nature of the deficiencies.
  - (6) **Joint Inspection at Completion of Civil Works.** A joint inspection will be organized by WUA, designated WRIDD staff and PIMS Quality Control Engineer. To ensure the quality of works, payment of the last installment to the contractor will be made only after they issue a **Joint Completion Certificate**.
  - (7) **Integrated on farm Crop Water Management Planning (ICWM).** At this stage, the WRIDD will initiate on-farm water management preparatory activities. As a result of the planning exercise, the WRIDD will prepare a subproject-specific integrated crop and water management (ICWM) plan. The plan will detail on-farm level physical improvements, including turnout, farm ditches, repairs of minor structures, pipes, water measuring structures, etc. A pilot scheme demonstration will be established to show different surface irrigation or micro-irrigation methods for example. ICWM -related institutional development activities will also start at this time, with selected programs (i) Orientation and dissemination, (ii) Review of WUA structure and composition (to allow effective on-farm water management), (iii) WUA capacity building, (iv) Farmers Field School (FFS) (irrigation part), (v) development of user list, and (vi) resources collection and mobilization.
  - (8) **Contract for WUA on-farm Water Management Infrastructure.** The WRIDD will make another contract with the WUA for construction of turnouts, small division boxes, water courses, small pipes, outlets, division boxes, and other small on-farm structures. WUAs will carry out these works as WUA payable work, under the guidance and supervision of the WRIDDs. The WUAs will contribute 25% (subject to change with any changes in the existing guideline) of the cost of these on-farm level works, in cash or in kind.
- D. Stage 4: Initial O&M, Agriculture Development and Post-Construction Monitoring and Support
- (1) **O&M Subcommittee, Initial Training and Planning.** At this stage, the WUA will establish an O&M subcommittee. The CMC members, trained in construction monitoring, will be encouraged to join this subcommittee since they have developed an understanding of the nature and purpose of the infrastructure. The subcommittee will prepare an **O&M plan** for the subproject. The plan will comprise an operational plan (corresponding to flow levels in different cropping seasons), a maintenance plan, and a resource mobilization plan. O&M Plans will have a different level of details in small hill and larger Terai schemes and HLIP.
  - (2) **On-farm Water Management.** At this stage, WRIDD personnel will deliver the key component of the on-farm water management program, including (i) crop planning and

selection, (ii) crop water requirement, (iii) irrigation requirement, allocation and distribution schedule, (iv) operational training, (v) flow measurement, (vi) soil moisture measurement, and (vii) Farmers Field School (irrigation). Participants will include WUA from branch canal, tertiary and field channel groups. Crop planning and selection will be carried out with the concerned AKC, as part of the ADP activities planned for the subproject. Operation plans will include both system-level operation (macro level) and on-farm level operation.

- (3) **System Planning and Operation.** Prior to the start of each irrigation season, the O&M subcommittee will prepare a ***System Operational Plan*** by collecting irrigation demands from each branch canal group, including arrangements to share water under low-flow conditions, with the facilitation of the SM. The level of details of these arrangements will depend on the complexity of the scheme.

During operation of the irrigation system, the O&M subcommittee will record any issues with water availability and distribution and request assistance from the designated WRIDD staff when serious problems are encountered. PIMS consultants will be invited to assist in resolving any such issues.

Based on the system operation experience during the first 1-2 seasons, as recorded by the O&M subcommittee and the designated WRIDD staff, the subcommittee will prepare a revised system operational plan. Some “trial and error” is expected over perhaps two or three irrigation seasons, before an optimal scheme operation level can be reached with facilitation by WRIDDs. System Operational Plans will have different levels of detail in small hill schemes and in larger Terai schemes, and for FMIS and HLIP.

- (4) **Maintenance Planning and Implementation.** At the end of the monsoon season, the O&M subcommittee will prepare a system maintenance plan with support from WRIDD and PIMS. This preparation will involve (i) a joint walk-through by O&M subcommittee members and by representatives of the concerned branch canal groups, (ii) identification of maintenance needs; and (iii) preparation of a maintenance plan including resource mobilization requirements. For a period of at least one year after completion of the civil works, WRIDD staff will provide assistance for the preparation of the system maintenance plans, training for the WUA to implement the maintenance plan, and monitoring of the O&M activities.

The maintenance plans will have different levels of detail in small hill schemes and in larger Terai schemes, and for FMIS, RIP and HLIP. Small simpler systems will not be over-burdened with complicated arrangements, while large more complex systems will receive training and support for maintenance planning and implementation.

- (5) **Fund for Major Rehabilitation.** Particular attention will be paid to building up a reserve fund for major rehabilitation or maintenance works. The WUA will be encouraged to collect and save at least 50% of the material and skilled labor costs of potentially vulnerable structures, in order to supplement the upfront cash contribution of 0.1% collected earlier. The DWRI and WRIDDs will ensure that further assistance for major natural calamities will be allocated on the basis of the WUA's capacity to provide sufficient matching funds from their reserves.

- (6) **Agriculture Extension and Support.** Agriculture extension and support will be

provided through **Agriculture Development Plans (ADPs)**, which will cover agriculture extension activities aimed at improving irrigated agriculture practices and techniques in the subproject areas. The AKC will be responsible for implementing the ADPs in each subproject using their officers and technical staff. The ADP will target farmers and sharecroppers within the command area. Agriculture extension activities will be (i) subproject-specific,<sup>[14]</sup> (ii) directly related to supporting irrigated agriculture, (iii) tailored to the needs of the beneficiaries, and (iv) selected in consultation with them through a simple need-based assessment. As much as possible, training sessions will be conducted in the field at subproject level, following the Farmers Field School Approach (FFS) as an example. In subprojects having easy access to road and market, commercialized farming activities will be emphasized.

- (7) **Performance Monitoring of Agriculture Development.** The performance monitoring of agriculture development will involve two separate exercises, (i) short-term (3 to 5 years) monitoring of outcomes, and long-term monitoring of impacts.

*Short-term Monitoring* - Monitoring of short-term effects on agriculture production in subproject areas will be carried out with project support. The monitoring and evaluation system will include agriculture data collection and processing by project personnel. Data will be collected for each cropping season, at each completed subproject, by the JT with the assistance of the JET/SM. Simple, yearly effect monitoring reports will be prepared by the PIMS consultants. During project implementation, AKC will also regularly monitor and evaluate the performance of their agriculture extension activities and adjust their programs accordingly. Based on their monitoring, AKC will provide guidance to the WUA for planning crops and services for the following or next year irrigation season.

*Long-term monitoring.* Long-term monitoring of impacts on agriculture production will fall under DOA's regular monitoring activities.<sup>[15]</sup> The project may also engage the services of outside organizations or institutes to perform benefit monitoring and evaluation (BME) studies.

- (8) **WUA Training for Organizational Management.** Training in administrative issues and record keeping will be provided by WRIDD with assistance of PIMS consultants. WUA will also engage an accredited auditor for financial auditing and will submit the results to the WRIDD/AKC/SMC.
- (9) **Post-construction O&M, Monitoring and Support.** After completion of subproject investment activities, the WUA will become responsible for the annual activity cycle including (i) planning and implementing O&M, (ii) agriculture activities, and (iii) performance monitoring including external financial audit.

The WUA will submit a checklist based annual report to SMC. The report will use a simple 2- to 3- page) template in Nepali, covering (i) agriculture production data, (ii) problems related to the irrigation system, and (iii) any other issues. COs, after training by AKC/PIMS, will support WUAs to prepare the report.

## ATTACHMENT A: SCHEME VERIFICATION PROCESS<sup>[17]</sup>

1. Once the long list of requested subprojects has been prepared by the WRIDD, a reconnaissance will be carried out by a multi-disciplinary team consisting of at least one Sr. Engineer and one AO from WRIDD and one JT/JTA from AKC. The focus of the reconnaissance will be to screen the proposed subproject against the project's selection criteria. As a minimum the following should be included:
  - Measurement of the flow in the surface water source (flow method) or discharge from the spring source (container method; the time it takes for the discharge to fill a large bucket)
  - A GPS track of the main canal and major branch canals to be rehabilitated or proposed canal alignment to be constructed will be recorded, indicating the point (waypoints) of the intake, major canal damage, slope stability problems (hills) and damaged hydraulic structures. A brief description of the problems should be provided with the way points. If the request is for lift irrigation, the proposed location of the pumping station, and transmission pipe alignments will be located with GPS. Recording of the GPS track should be done jointly by the surveyor and representatives of the WUA or ad-hoc committee.
  - The GPS survey should include tracks of proposed extensions or realignment of the main canal and major branch canals.
  - A GPS perimeter or boundary survey will be made of the command area as indicated by the farmers, including proposed extensions of the command area, clearly delineating the existing command area and proposed extension areas.
  
2. In a focus group discussion the following topics will be covered:
  - Confirm the presence of an effective and functioning community organization, formal or informal, that will be responsible for the subproject as an indicator of sustainability.
  - Verify the list of beneficiaries and their reported landholdings that were submitted together with the request for assistance. A least 70% of the beneficiary farmers with landholdings in the command area should have signed the request.
  - The absence of any major conflict within the community and any disputes relating to the water source with other communities will need to be confirmed.
  - Present crops and cropping pattern in the existing command area.
  - Verify the willingness to contribute to the subproject in accordance with the Project's beneficiary cost share scheme, and to collect an annual contribution for structural replacement costs, in addition to their regular maintenance.
  
3. Inform the beneficiaries of the condition to deposit an up-front contribution which will be refunded in case the subproject is not selected for any reason. It will be explained that the initial deposit will have to be used as a contingency fund for major repairs and replacement costs to be established by the WUA when the subproject is approved.

## **ATTACHMENT B: GPS JOINT WALKTHROUGH SURVEY METHODOLOGY<sup>181</sup>**

1. The methodology is built on the GPS aided walkthrough method that uses relatively recent improvements in survey aids, such as GPS equipment that stores and downloads tracks and waypoints, digitized or digital cartography, high resolution satellite imagery, and elaboration/presentation of the survey results in GIS software (e.g ArcGIS 9.x), or freeware such as QGIS.
2. For the GPS walkthrough surveys tracks of main and branch canal alignments will be recorded and conveyance or structural problems in these canals will be marked on the tracks. In addition to the canal alignment surveys, the hydraulic boundaries of the system will be recorded with the GPS equipment. The canal track and marked waypoints will be downloaded and processed in ArcGIS or compatible GIS software, using Garmin DNR software to convert the recorded GPS file format to the GIS shape file format (The Garmin DNR software and user guide is provided to the user). In the GIS software, the recorded canal tracks and command area boundaries will be overlaid on the newly available digital topographical maps from the Survey Department and, if available, high resolution satellite imagery that can be downloaded commercially through a licensed version of Google Earth or the access to the Digital Globe archives through the Global mapper software. High resolution images can also be composed from the free version of Google Earth by downloading the required coverage tile by tile maintain a fixed altitude and overlaps. There is also software available at minimal cost that processes the tile by tile downloading from Google Earth automatically.
3. The results of the surveys will permit the preparation of accurately geo-referenced mapping of system layouts, command area boundaries and system deficiencies. The accurate geo-referencing of the surveys and resulting maps will allow verification of the accuracy of the surveys through the overlay on the digital topographical maps and especially on the high resolution satellite imagery. Conversion of the Shape format to the Google KMZ (KML) propriety format will facilitate the display of the layout maps directly in Google Earth which allows a 3D rendering of the canal system layout and command area (Shape files can be directly converted to KMZ/KML format in Arc GIS 10 or by using a plug-in for the earlier Arc GIS versions (A shape to KML plug-in with user guide is provided to the user). Verification of the survey and mapping results in Google Earth 3D, further aids in assessing the correctness of the surveys and resulting system layout and facilitates the presentation of the survey results in an easy and cost effective manner to a wide audience.
4. In subproject preparation special attention will be given to the following:
  - (i) Description of problems/deficiencies in diversion, main and branch canals. Digital photographs will be taken of all the main problems encountered in the system and the photographs should be properly catalogued. This will allow geo-reference the photographs for display through hyperlinks in the GIS mapping or in Google Earth. Detailed attention will be given to preparation of sketches for the solutions proposed (not only limited to the diversion structure) and sketches will be entered/edited in AutoCad for clearer reproduction and display.
  - (ii) The assessment of the origin of the present problems, deficiencies and/or constraints in the systems.

- (iii) The command area boundary survey will include the mapping of areas with temporary or chronic irrigation water shortage. The mapping of water deficiencies in the command area will more clearly establish the relation between the system water conveyance and distribution problems and their effect on the water availability in the command area. This will guide the priority interventions and give a better insight into the water management practices.
- (iv) During the walkthrough survey the water management arrangements will be discussed with the farmers. This will be illustrated by mapping the spacing and alignments of branch canals and canal outlets and the mapping of seasonal or permanent water deficit sections of the command area.
- (v) Cadastral maps will be obtained before the start of the field work. Cadastral maps might not be properly geo-referenced therefore during the GPS survey some salient properties in the subproject area will be mapped to permit a correct overlay of the system layout and command area boundaries over the cadastral maps. This is a simple procedure and will allow a rapid assessment of people affected by the proposed interventions (mainly canal extensions) and allow an easy and rapid quantification of affected properties. Number of landholdings and related beneficiaries in the command area can be verified with the geo-referenced cadastral maps. The cadastral maps with the system layout overlay can be provided to the Social Mobilizer to verify and complete the listing and details of the beneficiaries.

5. **Other Field Investigations.** Apart from the GPS aided surveys and mappings the following aspects will be covered for the subproject preparation:

- (i) **Water availability:** Assessment of water availability at the diversion site, which would include: (i) estimate of the monthly flow at the diversion site and (ii) up/downstream water users.
  - The MIP spot flow measurement method (method developed by Medium Irrigation Project) will be used for flow assessment in ungauged rivers. A programme for the calculation of the water balance based on water availability and proposed cropping pattern is included in the CD provided to the user, including the user guide. The calculation of the water availability is based on the MIP flow assessment method and regional rainfall data and the crop water requirements are calculated using the FAO Cropwat and LocClim (Local Climate Estimator) programmes. Details are explained in the user guide for the water balance calculation.
  - The diversion sites and the present water abstractions up and downstream of the selected diversion site should be identified and geo-referenced for mapping of these water users. In small (sub) basins preferably all the other users will be identified, mapped and water use quantified to assess whether the basin in overall is water surplus or water deficit. This should, to certain extent, guide the emphasis of the proposed interventions (increased diversion and expansion or optimization of water utilization without increasing diversion). Detailed digital mapping of rivers and sub-river basins is available.
- (ii) **Identification of other water users;** this involves the identification of location and size of other irrigation systems (or other users) drawing water from the same source, both upstream and downstream of the subproject, assessment of any likely

impact and need for water sharing agreements. All systems up and down stream of the proposed diversion will be geo-referenced and mapped. The present seasonal irrigation water use in each of the identified systems will be precisely assessed based on consultations with the users and existing cropping patterns in these systems. Based on the seasonal water use in each system the water balance in the sub-basin will be calculated. The design of the proposed improvements will be put in the context of the overall water balance in the sub-basin. Based on discussions with the WUAs/farmers, the existing water rights in relation to adjacent systems identified above. If there are conflicts or potential conflicts, this will be discussed with the concerned parties and possible agreements on water sharing will be presented.

- (iii) Site investigations. More detailed site investigations will be required for major structural works (intakes and major drainage crossings and for landslide/slope stability problems in the hill irrigation systems. Site investigations should be precise and to the point and have a direct relationship with conditions, problems identified at diversion sites, and along the canal alignments. The results of the investigations should be properly mapped to show the relationship with the problems identified.
- (iv) Present Agriculture. GPS mapping of the present agriculture situation in GIS will provide a GIS database with the principal elements of area and type of crops. To this database the present yields can be added (average production per ha, the programme will calculate the total production). The areas and yields should be consistent with the mapped water deficient areas in the command area.
- (v) Future Agriculture. Based on expected improved water availability the mapping of the existing agriculture situation can be edited to show the future cropped areas. With the expected future yield based on average district crop yields the future production can be calculated.
- (vi) To obtain data on agriculture production cost, yields, agriculture income, other sources of income etc., focus group discussions (FGD) will be conducted as well as interviews with key informants. The FGDs will also provide information of the socio-economic profile of the community and their needs and development priorities. The main objective of the FGDs is to form the basis for social justification for the subproject implementation and identify poor and disadvantaged groups for livelihood enhancement. The FGDs shall include but not be limited to:
  - Discussion with the focus groups to confirm the project request and the list of the WUA members with individual landholding distribution within the existing and proposed extension area prepared by the JET/SM.
  - Coordinate with the Social Mobilizer for the preparation of WUA institutional development plan.
  - Together with the JET/SM, list out a development priority ranking with men and women through a separate session.
  - Collection of data and information on demographic characteristics.
  - Identify disadvantaged target groups and their location in and around the command area for the ADP support.
  - Assess the level of poverty through food sufficiency, educational and health facilities.
  - Assess landholding size and household income from agricultural and non-agricultural activities.

- Assess the issues of gender in irrigation development and management, market accessibility, and availability of service rendering agencies.
6. These discussions will have a simple and clear structure that will yield a standard set of results that can be processed in an automated spreadsheet format. From the focus group discussions a representative number of households will be identified for the household surveys. Based on these discussions the JET/SM and AKCs in consultation with palikas will hold further more specific discussions with the relevant groups on the agriculture development priorities and the support for livelihood enhancement of the disadvantaged groups.

## **ATTACHMENT C: MECHANISM FOR PROVIDING UPSCALING SUPPORT TO WUA FOR FARM MACHINERIES**

The project aims to demonstrate the use of machinery that addresses human labor shortages and climate change issues. By promoting the adoption of these technologies among farming communities through WUAs/WUCs on a co-financing basis, the project seeks to enhance agricultural productivity and sustainability. The co-financing by WUAs for agriculture machinery will be 50% and for WUA Facility will be 15%, following Government Directives. The following steps shall be followed for distribution of machineries:

**Step 1:** The Agricultural Knowledge Center (AKC) will prepare a list of farm machinery with specifications to be procured for scaling up, based on insights gained from previous demonstrations in close consultation with the WUAs/WUCs and with assistance from the PIMS. A standard form for submitting proposal will be prepared by AKC through the support of PIMS.

**Step 2:** AKCs will notify WUAs and WUCs to submit applications for the required farm machinery. The application should be accompanied with a business proposal detailing the use of the farm machinery and the benefit thereof. PIMS will assist WUAs in making the proposal.

**Step 3:** AKC will compile a list of WUA/WUC demands for machinery and submit this list, along with specifications, to the Sub-project Management Committee (SMC) for selection.

The SMC will select the WUAs/WUCs to receive machinery.

The SMC will select the type and number of machinery based on its suitability and available financial resources. The AKC will seek technical advice from CAMO during the selection of machineries for maximum effectivity of their use. If the number of proposals exceeds the budget, the SMC will rationalize the quantity and types of machinery to ensure equitable distribution (to the extent possible) or on a 'first-come-first-serve' basis.

**Step 4:** A procurement committee, formed at AKC in accordance with government regulations, will evaluate the proposals for the selected machinery as per step 3 above. AKC will approve the proposal on recommendation from SMC.

**Step 5:** AKC will issue a notice inviting suppliers to submit proposals detailing their machinery specifications and pricing following the prescribed ADB and government procurement policy.

**Step 6:** AKC will handover the machinery to WUA in farmers' general assembly and provide handing-over certificate.

AKC will provide an operation and maintenance manual of the machinery to WUA with required orientation (also carried out during demonstration of mechanization), and a list of machine repair and maintenance service provider available near the ISPs.

**Step 7:** The AKCs will monitor the quality and delivery of the machinery to the WUAs/WUCs, ensuring compliance with established standards and timelines. PIMS will assist AKC on the monitoring.

The progress in all the above stages will be reported in quarterly progress reports.

- <sup>[1]</sup> As determined by the preliminary water availability assessment during the Scheme Verification with preliminary GPS survey.
- <sup>[2]</sup> 100 already identified FMIS, Rajapur Irrigation Project and 12 Hill Lift irrigation systems are already selected for implementation.
- <sup>[3]</sup> See Subproject selection criteria, Main Report, Appendix 13
- <sup>[4]</sup> <http://cmiasp-mis.com.np/cmiaspaf/>
- <sup>[5]</sup> A proposed subproject not selected one year can still be considered the following years.
- <sup>[6]</sup> The IR screening checklist is provided in Main Report, Appendix 8.
- <sup>[7]</sup> The Sample Voluntary Land Donation Consent Form is provided in RF , Main Report, Appendix 8.
- <sup>[8]</sup> This is different from the information campaign at the beginning of Stage 1.
- <sup>[9]</sup> The WUA/ CMC will also record subproject activities done by the JET/SM
- <sup>[10]</sup> The WUAs will have two types of works, (i) WUA contribution works (in-kind works as beneficiary contribution), and (ii) WUA payable work - simple earthworks and structures up to NPR. 4 million)
- <sup>[11]</sup> Simple structures may be included in the beneficiary contribution works, in which case the Project will deliver materials and technical support (through WRIDDs) while WUAs mobilize labor contribution.
- <sup>[12]</sup> The committee shall be headed by a member from WUA Executive Committee. Other members should be selected from the different location of the canal system i.e. head, middle and tail, and should include at least one woman. The number of CMC members should be limited to a manageable size. Similar process shall be followed to form O&M subcommittee (if planned).
- <sup>[13]</sup> To maintain quality construction of infrastructure, the project (CPMO) shall coordinate with the National Vigilance Center (NVC) to carry out technical audits of selected sample of IMEP subprojects, and project budget will be made available for this purpose.
- <sup>[14]</sup> The DOA trainings related to irrigated agriculture may include: Production demonstrations (cereals), demonstrations on vegetable package, qualitative potato seed, green manure, agriculture lime, compost demos/farm yard manure improvement, bio-fertilizer, micronutrient, SRI, off-season cucumber/vegetable production, spice crop production, crop cutting, farmers tour, seed multiplication, Integrated Plant Nutrition System (IPNS), farmers field school, and distribution of improved vegetable kit, improved cereal kit, lentil seed kit, chemical & bio-fertilizer, and seed bin.
- <sup>[15]</sup> DOA's monitoring system involves **trimester-wise** and **annual monitoring** at subproject level by the concerned AULL, WUAs and WUFGs, with reports sent to DOA-PIU.
- <sup>[16]</sup> For example, by carry out a detailed baseline study on some 10-20 sample subprojects, followed by the actual benefit study 5 years later.
- <sup>[17]</sup> Source: CMIASP
- <sup>[18]</sup> Source: CMIASP

**Appendix 15: SAMPLE GRIEVANCE REGISTRATION FORM**  
(Available both in English and Nepali)

The \_\_\_\_\_ Project welcomes complaints, suggestions, queries, and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing *\*(CONFIDENTIAL)\** above your name. Thank you.

<b>Date</b>	<b>Place of registration</b>	<b>Project Town</b>			
		<b>Project:</b>			
<b>Contact information/personal details</b>					
<b>Name</b>		<b>Gender</b>	* Male * Female	<b>Age</b>	
<b>Home address</b>					
<b>Place</b>					
<b>Phone no.</b>					
<b>E-mail</b>					
<b>Complaint/suggestion/comment/question</b> Please provide the details (who, what, where, and how) of your grievance below:					
If included as attachment/note/letter, please tick here:					
<b>How do you want us to reach you for feedback or update on your comment/grievance?</b>					

**FOR OFFICIAL USE ONLY**

<b>Registered by:</b> (Name of official registering grievance)	
<b>Mode of communication:</b> Note/letter E-mail Verbal/telephonic	
<b>Reviewed by:</b> (Names/positions of officials reviewing grievance)	
<b>Action taken:</b>	
<b>Whether action taken disclosed:</b>	Yes No
<b>Means of disclosure:</b>	

गुनासो दर्ता फारम

सिँचाई आधुनिकरण अभिवृद्धि आयोजना सम्पूर्ण सरोकारवाला ब्यक्ति/संस्थाहरुलाई आयोजना कार्यान्वयन सम्बन्धमा कुनै गुनासा/जिज्ञासा/सल्लाह/सुझाव भए सो बारे जानकारी गराउन अनुरोध गर्दछ । तपाईंले दर्ता गर्नु भएका गुनासा, जिज्ञासा, सल्लाह, सुझाव उपर गरिएका निर्णय बारे जानकारी गराउन सहज होस् भन्नका लागि आफ्नो नाम तथा ठेगाना प्रदान गर्न अनुरोध गर्दछौ । यदि तपाईं आफ्नो व्यक्तिगत विवरण गोप्य राख्न चाहनुहुन्छ भने आफ्नो नाम को माथि "गोप्य" अंकित गर्नु होला ।

मिति:	दर्ता गरिएको स्थान:	आयोजनाको नाम:
सम्पर्क विवरण		
नाम:		
ठेगाना	गा.पा/न.पा: वार्ड: गाउ /टोल:	फोन: इमेल:
गुनासा, जिज्ञासा, सल्लाह, सुझाव: गुनासो सम्बन्धित बिषय, स्थान, कारण तथा सो मा संलग्न व्यक्ति आदि बारे बिस्तृत विवरण उल्लेख गर्नुहोला ।		
दर्ता भएका गुनासा/जिज्ञासा/सल्लाह/सुझाव उपर गरिएको छानविन / निर्णय बारे तपाईंलाई जानकारी गराउने उपयुक्त माध्यम		
कार्यालय प्रयोजनका लागि		
दर्ता गर्ने व्यक्तिको नाम:		पद:
संचार को माध्यम: (क) चिट्ठी (ख) इमेल (ग) मौखिक (घ) अन्य		
प्राप्त गुनासो सम्बोधनमा संलग्न पदाधिकारी:		
नाम:	पद:	
प्राप्त गुनासो सम्बोधन गर्न लिईएका निर्णय कार्यान्वायनको अवस्था:		
प्राप्त गुनासो सम्बोधन गर्न लिएका/कार्यान्वयन गरिएका निर्णय सार्वजनिकीकरण : (क) भएको (ख) भएको छैन		
सार्वजनिकीकरण गर्न उपयोग गरिएको माध्यम:		

## APPENDIX 16: TEMPLATE ON SOCIAL SAFEGUARDS MONITORING REPORT

1. This outline can be used for periodic monitoring report (semiannual). A safeguard monitoring report may include the following elements:

### A. Executive Summary

2. This section provides a concise statement of project scope and impacts, key findings and recommended actions.

### B. Background of the Report and Project Description

3. This section provides a general description of the project, including:

- Background/context of the monitoring report which includes the information on the project, project components, safeguards categorizations and general scope of the social safeguards impacts.
- Information on the implementation progress of the project activities, scope of monitoring report and requirements, reporting period, including frequency of submission and changes in project scope and adjusted safeguard measures, if applicable
- Summary table of identified impacts and the mitigation actions.

### C. Scope of Impacts

4. This section outlines the detail of:

- Scale and scopes of the project's safeguards impacts;
- Vulnerability status of the affected people/communities;
- Entitlements matrix and other rehabilitation measures, as applicable, as described in the approved final RPPs

### D. Compensation and Rehabilitation<sup>1</sup>

5. This section describes the process and progress of the implementation of the safeguards plan and other required activities as determined in the plan. This includes:

- Payment of the affected assets compensation, allowances, loss of incomes, etc. to the entitled persons;
- Provisions of other types of entitlement as described in the matrix and implementation of livelihood rehabilitation activities as determined in the plan.
- Quantitative as well as qualitative results of the monitoring parameters, as agreed in the plan, should be provided.

### E. Public Participation and Consultation

6. This section describes public participation and consultations activities during the project implementation as agreed in the plan. This includes final consultations with Affected persons during RIPP finalization after the completion of detail design; the numbers of activities conducted; issues raised during consultations and responses provided by the project team, implementing NGOs, project supervision consultants, contractors, etc.

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<sup>1</sup> Depending on the status of the final detail design during the submission of the report this activity might not yet started. Provide the information on the expected date the activity to be conducted instead.

## **F. Grievance Redress Mechanism (GRM)**

7. This section described the implementation of project GRM as design in the approved RIPP. This includes evaluations of its effectiveness, procedures, complaints receive, timeliness to resolve issues/ complaints and resources provided to solve the complaints. Special attentions should be given if there are complaints received from the affected people or communities.

## **G. Institutional Arrangement**

8. This section describes the actual implementation or any adjustment made to the institutional arrangement for managing the social safeguards issues in the projects. This includes the establishment of safeguards unit/ team and appointment of staff in the executing agency/Implementation A; implementation of the GRM and its committee; supervision and coordination between institutions involved in the management and monitoring of safeguards issues, the roles of NGO and women's groups in the monitoring and implementation of the plan, if any.

## **H. Monitoring Results – Findings**

9. This section describes the summary and key findings of the monitoring activities. The results are compared against previously established benchmarks and compliance status (e.g., adequacy of involuntary resettlement compensation rates and timeliness of payments, adequacy and timeliness of involuntary resettlement rehabilitation measures including serviced housing sites, house reconstruction, livelihood support measures, and training; budget for implementing EMP, RIPP, timeliness and adequacy of capacity building, etc.). It also compared against the objectives of safeguards or desired outcomes documented (e.g. involuntary resettlement impacts avoided or minimized; livelihood restored or enhanced; IP's identity, human right, livelihood systems and cultural uniqueness fully respected; IP not suffer adverse impacts, environmental impacts avoided or minimized, etc.). For FI projects this includes the effectiveness of the Environmental and Social Management System (ESMS) managed by the FI and its participating institutions<sup>2</sup>. If noncompliance or any major gaps identified, include the recommendation of corrective action plan.

## **I. Compliance Status**

10. This section will summarize the compliance status of the project activities with the loan covenants, ADB SPS (2009) on Safeguard Requirement 2&3 and the approved final RIPPs.

## **J. Follow up Actions, Recommendation and Disclosure**

11. This section describes recommendations and further actions or items to focus on for the remaining monitoring period. It also includes lesson learned for improvement for future safeguards monitoring activities. Disclosure dates of the monitoring report to the affected communities should also be included. A time-bound summary table for required actions should be included. Following appendices to be included:

- i. List of affected persons and entitlements;
- ii. Summary of RP with entitlement matrix;

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<sup>2</sup> Specific for the FI projects, external agency may be required to conduct an audit of the project ESMS.

- iii. Copies of affected person's certification of payment (signed by the affected persons);
- iv. Summary of minutes of meetings during public consultations;
- v. Summary of complaints received and solution status.

## **APPENDIX 17: TEMPLATE ON QUARTERLY PROGRESS MONITORING REPORT**

### **Table of Contents**

- A. Introduction and Basic Data
- B. Utilization of Funds (ADB Loan, SFD Loan, and Counterpart Funds)
- C. Project Purpose and Implementation Progress
- D. Compliance with Covenants
- E. Financial Management
- F. Contractor and Consultant Performance Monitoring
- G. Major Project Issues and Problems

Attachment 1: Fund Utilization Status

Attachment 2: Disbursement report for the Fiscal Year to Date and Cumulative including Detailed Reconciliation (by Withdrawal Application) of Project Records and ADB Disbursement Records (LFIS)

Attachment 3: Status of Signed Contracts/Register of Contracts Cumulative to date

Attachment 4: Project Summary

Attachment 5: Status on Agreed Actions with ADB Review Mission

Attachment 6: Status of Gender Equality and Social Inclusion Action Plan

Attachment 7: Status on Environmental Safeguards

Attachment 8: Status on Social Safeguards

Attachment 9: Status of Internal/External Audit Observations – Cumulative from Inception to End of Reporting Period

Attachment 10: Status of Financial Management Action Plan

Attachment 11: Status of FM related actions agreed during ADB review missions or TPRMs

Attachment 12: Status of Achieving Project Outcome and Outputs- DMF Table

Attachment 13: Consultant and Contractors Performance Evaluation

Attachment 14: Issues and Proposed Actions

## **A. Introduction and basic Data**

In this section include the following information:

- (i) loan number, project title, borrower, executing agency(ies) (EA), implementing agency(ies) (IA);
- (ii) total estimated project cost and financing plan;
- (iii) status of project financing including availability of counterpart funds and cofinancing;
- (iv) dates of approval, signing, and effectiveness of ADB loan;
- (v) original and revised (if applicable) ADB loan closing date and elapsed loan period based on original and revised (if applicable) loan closing dates; and
- (vi) date of last ADB review mission.

## **B. Utilization of Funds (ADB Loan, SFD Loan, and Counterpart Funds)**

The financial information in the format outlined below are to be included in the quarterly progress reports (QPRs) to be submitted to ADB within 45 days after each quarter. In case of delays or incomplete information, ADB will submit a reminder to the EA/IA. Repeated delays or incomplete information may have a negative impact on the project performance ratings and may be discussed during review missions.

In this section include the following information:

- (i) Overall status of project financing including the adequacy and timeliness of counterpart funds (if any);
- (ii) cumulative contract awards financed by the ADB loan, and counterpart funds (if any) (commitment of funds to date), and comparison with time-bound projections (targets – for ADB financing compare the actual contract awards with the contract award curve included in the PAM). Include an analysis of significant variances between planned and actual contract awards; Provide contract-wise details as per annex 2
- (iii) cumulative disbursements from the ADB loan, and counterpart funds (expenditure to date), and comparison with time-bound projections (targets – for the ADB financing compare the actual disbursement with the disbursement projections as per the S curve included in the PAM ), Include an analysis of significant variances between planned and actual disbursements;
- (iv) Reconciliation of project records and ADB disbursement records (LFIS/GFIS) for the reporting period and cumulative from project inception to end of the reporting period. Explain reasons for discrepancies and outline follow-up actions required (if any). Attach a detailed reconciliation by WA as per Annex 1; and,
- (v) re-estimated costs to completion (if required), need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.

## **C. Project Purpose Implementation Progress**

In this section include the following information:

- (i) status of project scope and implementation arrangements compared with those in the report and recommendation of the President (RRP), and whether major changes have occurred or will need to be made;

- (ii) an assessment of the likelihood that the project outcome and outputs will be achieved in part or in full, and whether remedial measures are required based on the current project scope and implementation arrangements;
- (iii) an assessment of changes to the key risks that affect achievement of the outcome and outputs, and quantifiable implementation targets;
- (iv) monitoring and reporting on gender equality and social dimensions, safeguards (environment, resettlement and indigenous peoples), other requirements that might adversely affect the project's viability or accomplishment of project outcome, and other development priorities such as climate change;
- (v) assessment of project implementation arrangements such as establishing, staffing, and funding of the project management office or project implementation units;
- (vi) information relating to the EA's internal operations that impacts on implementation arrangements or project progress;
- (vii) assessment of the progress of each implementation activity, such as, PAI 5.01 Revised in December 2023 Appendix 1 Page 3 of 7 a. recruitment of consultants and their performance; b. procurement of goods and works (from preparation of detailed designs and bidding documents to contract awards); c. the performance of suppliers, manufacturers, and contractors for goods and works contracts; and d. comparison with the original implementation schedule—quantifiable and monitorable target, (include charts such as bar or milestone to illustrate progress and actual versus planned expenditure, S-curve graph showing the relationship between physical and financial performance, and actual progress in comparison with the original schedules and budgets). The guidelines in calculating the project progress including examples are shown in Appendix 2.
- (viii) status of implementation of financial management action plan, and risk assessment and risk management plan; and
- (ix) status of implementation of action plan from ADB's review missions.

#### **D. Compliance with Covenants**

In this section include the following information:

- (i) the borrower's compliance with policy loan covenants such as sector reform initiatives and EA reforms, and the reasons for any noncompliance or delay in compliance;
- (ii) the borrower's and EA's compliance with covenants in legal agreements including the EA's financial management, and the timely submission of audited project financial statements and audited entity financial statements; and
- (iii) the borrower's and EA's compliance with project-specific loan covenants associated with implementation, gender equality and social dimensions, safeguards (environment, resettlement, and indigenous peoples), anticorruption and other requirements specified in the loan agreement (Sections VII. Safeguards and VIII. Gender Equality and Social Dimensions of the PAM).

#### **E. Financial Management**

In this section, include the following information:

- (i) Summary of the Financial management arrangements in the project including: a) any problems in the existing FM arrangements and/or flow of funds and b) any

- significant changes occurred during the reporting period (e.g. FM staff turnover, implementation of new financial systems, emerging FM related risks etc.);
- (ii) Summary of the status of each agreed action in the FM action plan outlined in the PAM. Attach a detailed log as per Annex 4;
  - (iii) Outline the status of recommendations and immediate actions provided by ADB as part of the APFS/AEFS review (if any) and FM related recommendations agreed during ADB review missions (if any). Attach a detailed log as per Annex 5; and,
  - (iv) Summarize the status of Status of past internal or external audit observations (if any). Attach a detailed log as per Annex 3.

**Annexes:** Attach the following annexes on Financial Management to the report:

- Annex 1: Statement of cash receipts and payment by category
- Annex 2: ADB loan/grant disbursement report including a detailed reconciliation (by Withdrawal application) of project records and ADB disbursement records (LFIS/GILFIS) for the fiscal year to date and cumulative;
- Annex 3: Status of signed contracts cumulative to date
- Annex 4: Status of External/internal Audit Observations – Cumulative from Inception to End of Reporting Period
- Annex 5: Status of FM action plan (complied/ongoing)
- Annex 6: Status of FM related actions agreed during ADB review missions and TPRM.

### **Contractor and Consultant Performance Monitoring Major Project Issues and Problems**

**Annex 1. Statement of Cash Receipts and Payments by Category**

	<b>Reporting Period (Quarterly / Semi- annually)</b>	<b>Year to date</b>	<b>Cumulative</b>	<b>Hard commitments (contracts signed not paid)</b>
In the currency of the financial statements				
<b>Cash receipts</b>				
ADB Advance/Replenishments				
ADB Direct Payments				
ADB Reimbursement/Retroactive Financing				
Government Beneficiary				
<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
<b>Payments</b>				
Civil Works				
Mechanical and Equipment				
Consultants				
Capacity Building				



2: Equipment/ supplies										
3. Consulting services										
<b>Total</b>										

\*Classified a per expenditure categories outlined in the PAM.

**Annex 4: Status of External/internal Audit Observations – Cumulative from Inception to End of Reporting Period**

Responsible Entity:	External / internal Audit Recommendation	Date of the Recommendation	Planned Actions to Address the Recommendation	Responsibility	Current Status of the Planned Action (pending /resolved)	Remarks

**Annex 5: Status of Financial Management Action Plan**

Key Risk	Risk Mitigating Activity	Timeline	Responsible Entity	Current status (implemented/Pending)	Remarks (including an action plan in case of noncompliance)

**Annex 6: Status of FM related actions agreed during ADB review missions or TPRMs**

Date of the review mission	Agreed actions	Timeline	Responsible Entity	Current status (implemented/Pending)	Remarks